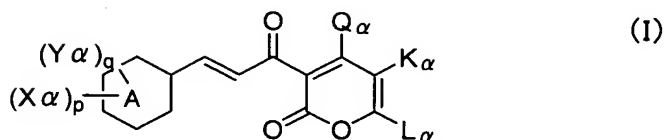


## CLAIMS

1. A cinnamoyl compound represented by the formula (I):



wherein

I. A represents a benzene ring or a pyridine ring; and in  
 5 (Y<sub>α</sub>)<sub>q</sub>, Y<sub>α</sub> is a substituent on a carbon atom and represents a  
 group included in the following X<sub>0</sub> group or Y<sub>0</sub> group, q  
 represents 0, 1, 2, 3 or 4, and Y<sub>α</sub>s are the same or  
 different when q is 2 or more and the adjacent two same or  
 different Y<sub>α</sub>s together may form a group included in the Z<sub>0</sub>  
 10 group to be fused to the A ring when q is 2 or more; and in  
 (X<sub>α</sub>)<sub>p</sub>, X<sub>α</sub> represents a substituent on a carbon atom which  
 does not belong to the following X<sub>0</sub> group, Y<sub>0</sub> group and Z<sub>0</sub>  
 group, p represents 1, 2, 3, 4 or 5, and X<sub>α</sub>s may be the  
 same or different when p is 2 or more; and the sum of p and  
 15 q is 5 or less;

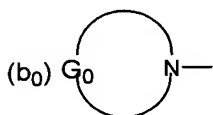
(1) the X<sub>0</sub> group: a M<sub>a</sub>-group, wherein M<sub>a</sub> represents a  
 R<sub>b</sub>- group (wherein R<sub>b</sub> represents a C1-C10 alkyl group  
 optionally substituted with a halogen atom), a halogen atom,  
 a nitro group, a cyano group, a hydroxy group, a R<sub>c</sub>-B<sub>a</sub>-R<sub>d</sub>-  
 20 group (wherein R<sub>c</sub> represents a C1-C10 alkyl group  
 optionally substituted with a halogen atom, B<sub>a</sub> represents

an oxy group, a thio group, a sulfinyl group or a sulfonyl group, and  $R_d$  represents a single bond or a C1-C10 alkylene group), a  $HOR_d-$  group (wherein  $R_d$  is as defined above), a  $R_e-CO-R_d-$  group (wherein  $R_e$  represents a hydrogen atom, or a C1-C10 alkyl group optionally substituted with a halogen atom, and  $R_d$  is as defined above), a  $R_e-CO-O-R_d-$  group (wherein  $R_e$  and  $R_d$  are as defined above), a  $R_eO-CO-R_d-$  group (wherein  $R_e$  and  $R_d$  are as defined above), a  $HO-CO-CH=CH-$  group, a  $R_eR_e'N-R_d-$  group (wherein  $R_e$  and  $R_e'$  are the same or different,  $R_e$  is as defined above,  $R_e'$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_e-CO-NR_e'-R_d-$  group (wherein  $R_e$ ,  $R_e'$  and  $R_d$  are as defined above), a  $R_bO-CO-N(R_e)-R_d-$  group (wherein  $R_b$ ,  $R_e$  and  $R_d$  are as defined above), a  $R_eR_e'N-CO-R_d-$  group (wherein  $R_e$ ,  $R_e'$  and  $R_d$  are as defined above), a  $R_eR_e'N-CO-NR_e''-R_d-$  group (wherein  $R_e$ ,  $R_e'$  and  $R_e''$  are the same or different,  $R_e$  and  $R_e'$  are as defined above,  $R_e''$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_eR_e'N-C(=NR_e'')-NR_e'''-R_d-$  group (wherein  $R_e$ ,  $R_e'$ ,  $R_e''$  and  $R_e'''$  are the same or different,  $R_e$ ,  $R_e'$  and  $R_e''$  are as defined above,  $R_e'''$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_b-SO_2-NR_e-R_d-$  group (wherein  $R_b$ ,  $R_e$  and  $R_d$  are as defined above), a  $R_eR_e'N-SO_2-R_d-$  group (wherein  $R_e$ ,  $R_e'$  and  $R_d$  are as defined above), a C2-C10 alkenyl group or a C2-C10 alkynyl group;

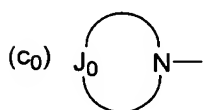
(2) the  $Y_0$  group: a  $M_{b0}-R_d-$  group, wherein  $M_{b0}$

represents a  $M_{c0}$ - group

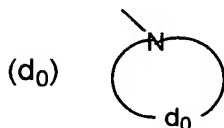
[wherein  $M_{c0}$  represents a  $M_{d0}$ - $R_{d'}$ - group [wherein  $M_{d0}$  represents a 6 to 10-membered aryl group optionally substituted with a  $M_a$ - group (wherein  $M_a$  is as defined above), a 5 to 10-membered heteroaryl group optionally substituted with a  $M_a$ -group (wherein  $M_a$  is as defined above), a 3 to 10-membered cyclic hydrocarbon or heterocyclic group optionally substituted with a  $M_a$ - group (wherein  $M_a$  is as defined above) and optionally containing an unsaturated bond, a  $(b_0)$ - group



(in the  $(b_0)$ - group,  $G_0$  forms an optionally substituted, saturated or unsaturated, nonaromatic 5 to 14-membered cyclic hydrocarbon or heterocyclic ring), a  $(c_0)$ - group

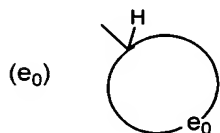


(in the  $(c_0)$ - group,  $J_0$  forms a 5 to 7-membered aromatic ring optionally containing a nitrogen atom), a  $(d_0)$ - group



[wherein  $d_0$  forms a 5 to 12-membered hydrocarbon ring which is substituted with a carbonyl group or a thiocarbonyl group and further which may be optionally substituted with an oxy group, a thio group, a  $-NR_1$ - group (wherein  $R_1$

represents a hydrogen atom, a C1-C10 alkyl group, a C2-C10 alkyl group substituted with a halogen atom or a R<sub>2</sub>-B<sub>1</sub>-group (wherein R<sub>2</sub> represents a C1-C10 alkyl group, a C3-C10 alkenyl group or a C3-C10 alkynyl group, and B<sub>1</sub> represents an oxy group, a thio group, a sulfinyl group or a sulfonyl group), a C3-C10 alkenyl group, or a C3-C10 alkynyl group}, a sulfinyl group or a sulfonyl group] or a (e<sub>0</sub>)- group



{wherein e<sub>0</sub> forms a 5 to 12-membered hydrocarbon ring optionally substituted with a carbonyl group, a thiocarbonyl group, an oxy group, a thio group, a -NR<sub>1</sub>-group (wherein R<sub>1</sub> is as defined above), a sulfinyl group or a sulfonyl group}; and R<sub>d</sub>' is the same as or different from R<sub>d</sub> and has the same meaning as R<sub>d</sub> has]],

a M<sub>c0</sub>-B<sub>a</sub>- group (wherein M<sub>c0</sub> and B<sub>a</sub> are as defined above), a M<sub>c0</sub>-CO- group (wherein M<sub>c0</sub> is as defined above), a M<sub>c0</sub>-CO-O- group (wherein M<sub>c0</sub> is as defined above), a M<sub>c0</sub>O-CO- group (wherein M<sub>c0</sub> is as defined above), a M<sub>c0</sub>R<sub>e</sub>N- group (wherein M<sub>c0</sub> and R<sub>e</sub> are as defined above), a M<sub>c0</sub>-CO-NR<sub>e</sub>- group (wherein M<sub>c0</sub> and R<sub>e</sub> are as defined above), a M<sub>c0</sub>O-CO-NR<sub>e</sub>- group (wherein M<sub>c0</sub> and R<sub>e</sub> are as defined above), a M<sub>c0</sub>R<sub>e</sub>N-CO- group (wherein M<sub>c0</sub> and R<sub>e</sub> are as defined above), a M<sub>c0</sub>R<sub>e</sub>N-CO-NR<sub>e</sub>'- group (wherein M<sub>c0</sub>, R<sub>e</sub> and R<sub>e</sub>' are as defined above), a M<sub>c0</sub>R<sub>e</sub>N-C(=NR<sub>e</sub>')-NR<sub>e</sub>''- group (wherein M<sub>c0</sub>, R<sub>e</sub>, R<sub>e</sub>' and R<sub>e</sub>'')

are as defined above), a  $M_{C0}-SO_2-NR_e-$  group (wherein  $M_{C0}$  and  $R_e$  are as defined above) or a  $M_{C0}R_eN-SO_2-$  group (wherein  $M_{C0}$  and  $R_e$  are as defined above), and  $R_d$  is as defined above;

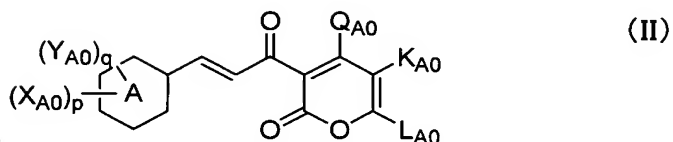
5           (3) the  $Z_0$  group: a 5 to 12-membered cyclic hydrocarbon or heterocyclic ring optionally substituted with a halogen atom, a C1-C10 alkoxy group, a C3-C10 alkenyloxy group, a C3-C10 alkynyloxy group, a carbonyl group, a thiocarbonyl group, an oxy group, a thio group, a  
10       sulfinyl group or a sulfonyl group, which is an aromatic or nonaromatic and monocyclic or fused ring and which is fused to the A ring;

II.  $Q_\alpha$  represents an optionally substituted hydroxy group, or an optionally substituted amino group;

15       III.  $K_\alpha$  and  $L_\alpha$  are the same or different, and represent a hydrogen atom, or a substituent on a carbon atom, or  $K_\alpha$  and  $L_\alpha$  may form a C1-C10 alkylene group optionally having a substituent or a C1-C10 alkenylene group optionally having a substituent; and

20       the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected  
25       is the same, selected substituents may be the same or different as long as they are selected within the range;

2. A cinnamoyl compound represented by the formula (II):



wherein

I. A represents a benzene ring or a pyridine ring;

5 II. in  $(X_{A0})_p$ ,  $X_{A0}$  is a substituent on a carbon atom and represents a group included in any group of the following  $A_0$  to  $N_0$  groups,  $p$  represents 1, 2, 3, 4 or 5, and when  $p$  is 2 or more,  $X_{A0}$ s are the same or different;

(1) the  $A_0$  group:

10 a  $D_1$ - $R_4$ - group [ wherein  $D_1$  represents a  $(R_1-(O)_k-)$  $A_1$ N-  
 $(O)_k$ - group [wherein  $R_1$  represents a hydrogen atom, or a  
 C1-C10 alkyl group, or a C2-C10 alkyl group substituted  
 with a halogen atom or a  $R_2$ - $B_1$ -group (wherein  $R_2$  represents  
 a C1-C10 alkyl group, a C3-C10 alkenyl group or a C3-C10  
 15 alkynyl group, and  $B_1$  represents an oxy group, a thio group,  
 a sulfinyl group or a sulfonyl group), or a C3-C10 alkenyl  
 group, or a C3-C10 alkynyl group,  $k$  represents 0 or 1,  $A_1$   
 represents a  $R_3-(CHR_0)_m-(B_2-B_3)_m$ - group {wherein  $R_3$   
 represents a hydrogen atom, or a C1-C10 alkyl group  
 20 optionally substituted with a halogen atom or a  $R_2$ - $B_1$ -

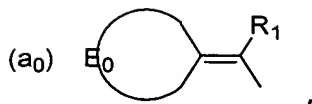
group (wherein  $R_2$  and  $B_1$  are as defined above), or a C2-C10 alkenyl group, or a C2-C10 alkynyl group,  $R_0$  represents a hydrogen atom, a C1-C10 alkyl group or a C2-C10 haloalkyl group,  $m$  represents 0 or 1,  $B_2$  represents a single bond, an oxy group, a thio group or a  $-N((O)_nR_1')$ - group (wherein  $R_1'$  is the same as or different from  $R_1$ , and has the same meaning as  $R_1$  has, and  $n$  represents 0 or 1),  $B_3$  represents a carbonyl group, a thiocarbonyl group or a sulfonyl group,  $m'$  represents 0 or 1, and when  $B_3$  is a sulfonyl group, it does not occur that  $m$  is 0 and  $R_3$  is a hydrogen atom at the same time}, and  $k'$  represents 0 or 1], and  $R_4$  represents a C1-C10 alkylene group, provided that a  $R_0'R_0''N-R_4$ - group (wherein  $R_0'$  and  $R_0''$  are the same as or different from  $R_0$  and have the same meaning as  $R_0$  has, and  $R_4$  is as defined above) is excluded],

a  $D_2-R_4$ - group[ wherein  $D_2$  represents a cyano group, a  $R_1R_1'NC(=N-(O)_n-A_1)$ - group (wherein  $R_1$ ,  $R_1'$ ,  $n$  and  $A_1$  are as defined above), an  $A_1N=C(-OR_2)$ - group (wherein  $A_1$  and  $R_2$  are as defined above) or a  $NH_2-CS$ - group, and  $R_4$  is as defined above],

a  $D_3-R_4$ - group[ wherein  $D_3$  represents a nitro group or a  $R_1OSO_2$ - group (wherein  $R_1$  is as defined above), and  $R_4$  is as defined above], or

a  $R_1OSO_2$ - group[ wherein  $R_1$  is as defined above];

(2) the  $B_0$  group: an  $(a_0)$ - group



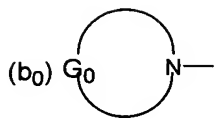
in the (a<sub>0</sub>)- group, E<sub>0</sub> forms an optionally substituted, saturated or unsaturated, aromatic or nonaromatic 5 to 14-membered cyclic hydrocarbon or heterocyclic ring, and R<sub>1</sub> is as defined above;

(3) the C<sub>0</sub> group: a C<sub>2</sub>-C<sub>10</sub> alkenyl group substituted with a halogen atom, a R<sub>2</sub>-B<sub>1</sub>- group (wherein R<sub>2</sub> and B<sub>1</sub> are as defined above), a D<sub>4</sub>-R<sub>4</sub>- group [wherein D<sub>4</sub> represents a hydroxy group or an A<sub>1</sub>-O- group (wherein A<sub>1</sub> is as defined above), and R<sub>4</sub> is as defined above], a D<sub>5</sub>- group [wherein D<sub>5</sub> represents a O=C(R<sub>3</sub>)- group (wherein R<sub>3</sub> is as defined above), an A<sub>1</sub>-(O)<sub>n</sub>-N=C(R<sub>3</sub>)- group (wherein A<sub>1</sub>, n and R<sub>3</sub> are as defined above), a R<sub>1</sub>-B<sub>0</sub>-CO-R<sub>4</sub>-(O)<sub>n</sub>-N=C(R<sub>3</sub>)- group {wherein R<sub>1</sub>, R<sub>4</sub>, n and R<sub>3</sub> are as defined above, and B<sub>0</sub> represents an oxy group, a thio group or a -N((O)<sub>m</sub>R<sub>1</sub>')- group (wherein R<sub>1</sub>' and m are as defined above)}, a D<sub>2</sub>-R<sub>4</sub>-(O)<sub>n</sub>-N=C(R<sub>3</sub>)- group (wherein D<sub>2</sub>, R<sub>4</sub>, n and R<sub>3</sub> are as defined above) or a R<sub>1</sub>A<sub>1</sub>N-N=C(R<sub>3</sub>)- group (wherein R<sub>1</sub>, A<sub>1</sub> and R<sub>3</sub> are as defined above)], a R<sub>1</sub>A<sub>1</sub>N-O-R<sub>4</sub>- group (wherein R<sub>1</sub>, A<sub>1</sub> and R<sub>4</sub> are as defined above), a R<sub>1</sub>(A<sub>1</sub>-(O)<sub>n</sub>-)N- group (wherein R<sub>1</sub>, A<sub>1</sub> and n are as defined above), a D<sub>2</sub>- group (wherein D<sub>2</sub> is as defined above) or a D<sub>3</sub>- group (wherein D<sub>3</sub> is as defined above);

(4) the D<sub>0</sub> group: a C<sub>2</sub>-C<sub>10</sub> alkynyl group substituted

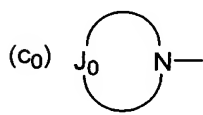


with a (b<sub>0</sub>)-R<sub>4</sub>- group (in (b<sub>0</sub>))



G<sub>0</sub> forms an optionally substituted, saturated or unsaturated, nonaromatic 5 to 14-membered cyclic

5 hydrocarbon or heterocyclic ring), a (c<sub>0</sub>)-R<sub>4</sub>- group (in (c<sub>0</sub>))



J<sub>0</sub> forms an aromatic 5 to 7-membered ring optionally containing a nitrogen atom and R<sub>4</sub> is as defined above), a halogen atom, a R<sub>2</sub>-B<sub>1</sub>-R<sub>4</sub>- group (wherein R<sub>2</sub>, B<sub>1</sub> and R<sub>4</sub> are as defined above), a D<sub>4</sub>-R<sub>4</sub>- group (wherein D<sub>4</sub> and R<sub>4</sub> are as defined above), a D<sub>5</sub>- group (wherein D<sub>5</sub> is as defined above), a D<sub>1</sub>-R<sub>4</sub>- group (wherein D<sub>1</sub> and R<sub>4</sub> are as defined above), a D<sub>2</sub>- group (wherein D<sub>2</sub> is as defined above) or a D<sub>3</sub>-R<sub>4</sub>- group (wherein D<sub>3</sub> and R<sub>4</sub> are as defined above);

15 (5) the E<sub>0</sub> group: an A<sub>2</sub>-CO-R<sub>5</sub>- group, provided that R<sub>5</sub> is not a vinylene group when A<sub>2</sub> is a hydroxy group, wherein A<sub>2</sub> represents

(i) an A<sub>3</sub>-B<sub>4</sub>- group

wherein A<sub>3</sub> represents a hydrogen atom, or a C1-C10 alkyl group, or a C2-C10 haloalkyl group, or a C2-C10 alkenyl group optionally substituted with a halogen atom, or a C3-C10 alkynyl group optionally substituted with a halogen atom, or a R<sub>a0</sub>-(R<sub>4</sub>)<sub>m</sub>- group (wherein R<sub>a0</sub> represents

20

an optionally substituted 5 to 7-membered aryl group or heteroaryl group, and  $R_4$  and  $m$  are as defined above), or a C1-C10 alkyl group substituted with a  $(b_0)$ - $R_4$ - group (wherein  $(b_0)$  and  $R_4$  are as defined above), a  $(c_0)$ - $R_4$ - group (wherein  $(c_0)$  and  $R_4$  are as defined above), a  $R_2$ - $B_1$ - $R_4$ - group (wherein  $R_2$ ,  $B_1$  and  $R_4$  are as defined above), a  $D_4$ - $R_4$ - group (wherein  $D_4$  and  $R_4$  are as defined above), a  $D_5$ - group (wherein  $D_5$  is as defined above), a  $D_1$ - $R_4$ - group (wherein  $D_1$  and  $R_4$  are as defined above), a  $D_2$ - group (wherein  $D_2$  is as defined above), a  $D_3$ - $R_4$ - group (wherein  $D_3$  and  $R_4$  are as defined above) or an  $A_4$ - $SO_2$ - $R_4$ - group {wherein  $A_4$  represents a  $(b_0)$ - group (wherein  $(b_0)$  is as defined above), a  $(c_0)$ - group (wherein  $(c_0)$  is as defined above) or a  $R_1R_1'$ -N- group (wherein  $R_1$  and  $R_1'$  are as defined above), and  $R_4$  is as defined above}, and

$B_4$  represents an oxy group, a thio group or a  $N((O)_mR_1)$ - group (wherein  $R_1$  and  $m$  are as defined above), provided that  $A_3$  is not a hydrogen atom when  $B_4$  is a thio group;

(ii) a  $R_1$ - $B_4$ -CO- $R_4$ - $B_4'$ - group, wherein  $R_1$ ,  $B_4$  and  $R_4$  are as defined above,  $B_4'$  is the same as or different from  $B_4$  and has the same meaning as  $B_4$  has, provided that  $R_2$  is not a hydrogen atom when  $B_4$  is a thio group, or

a  $D_2$ - $R_4$ - $B_4$ - group, wherein  $D_2$ ,  $R_4$  and  $B_4$  are as defined above;

(iii) a  $R_2\text{-SO}_2\text{-NR}_1\text{-}$  group, wherein  $R_2$  is as defined above, provided that a hydrogen atom is excluded, and  $R_1$  is as defined above;

(iv) a  $(b_0)\text{-}$  group, wherein  $(b_0)$  is as defined above;

5 (v) a  $(c_0)\text{-}$  group, wherein  $(c_0)$  is as defined above;

or

(vi) a  $R_1A_1N\text{-NR}_1'\text{-}$  group, wherein  $R_1$ ,  $A_1$  and  $R_1'$  are as defined above; and

$R_5$  represents a C2-C10 alkenylene group optionally  
10 substituted with a halogen atom or a C2-C10 alkynylene group;

(6) the  $F_0$  group: an  $A_5\text{-B}_5\text{-R}_6\text{-}$  group

wherein  $A_5$  represents a C2-C10 alkyl group substituted  
with a  $D_4\text{-}$  group (wherein  $D_4$  is as defined above), a  $D_1\text{-}$   
15 group (wherein  $D_1$  is as defined above), a  $D_3\text{-}$  group  
(wherein  $D_3$  is as defined above) or an  $A_4\text{-SO}_2\text{-}$  group  
(wherein  $A_4$  is as defined above), or a C1-C10 alkyl group  
substituted with a  $R_2\text{-B}_1\text{-}$  group (wherein  $R_2$  and  $B_1$  are as  
defined above), a  $D_2\text{-}$  group (wherein  $D_2$  is as defined  
20 above), a  $D_5\text{-}$  group (wherein  $D_5$  is as defined above) or an  
 $A_2\text{-CO-}$  group (wherein  $A_2$  is as defined above),

$B_5$  represents a  $B_1\text{-}$  group (wherein  $B_1$  is as defined  
above) or a  $\text{-NA}_1\text{-}$  group (wherein  $A_1$  is as defined above),  
and

25  $R_6$  represents a single bond or a C1-C10 alkylené

group;

(7) the  $G_0$  group: an  $A_6-B_5-R_6$ - group

wherein  $A_6$  represents an  $(a_0)-R_4$ - group (wherein  $(a_0)$  and  $R_4$  are as defined above), or a C2-C10 alkenyl group, or  
 5 a C2-C10 alkynyl group, or a C2-C10 alkenyl group substituted with a halogen atom, a  $R_2-B_1$ - group (wherein  $R_2$  and  $B_1$  are as defined above), a  $D_5$ - group (wherein  $D_5$  is as defined above), a  $D_2$ - group (wherein  $D_2$  is as defined above) or an  $A_2-CO$ - group (wherein  $A_2$  is as defined above) ,  
 10 or a C2-C10 alkynyl group substituted with a halogen atom, a  $R_2-B_1$ - group (wherein  $R_2$  and  $B_1$  are as defined above), a  $D_5$ - group (wherein  $D_5$  is as defined above),  $D_2$ - group (wherein  $D_2$  is as defined above) or an  $A_2-CO$ - group (wherein  $A_2$  is as defined above), or a C3-C10 alkenyl  
 15 group substituted with a  $(b_0)$ - group (wherein  $(b_0)$  is as defined above), a  $(c_0)$ - group (wherein  $(c_0)$  is as defined above), a  $D_4$ - group (wherein  $D_4$  is as defined above), a  $D_1$ - group (wherein  $D_1$  is as defined above) or a  $D_3$ - group (wherein  $D_3$  is as defined above), or a C3-C10 alkynyl group  
 20 substituted with a  $D_4$ - group (wherein  $D_4$  is as defined above), a  $D_1$ - group (wherein  $D_1$  is as defined above) or a  $D_3$ - group (wherein  $D_3$  is as defined above), and

$B_5$  and  $R_6$  are as defined above;

(8) the  $H_0$  group:

25 a  $D_2-N(-(O)_n-A_1)-R_6$ - group (wherein  $D_2$ ,  $n$ ,  $A_1$  and  $R_6$  are

as defined above),

a  $D_2$ - group (wherein  $D_2$  is as defined above, provided that a cyano group is excluded),

5 a  $R_1(R_1'(O)_n)N-CR_1''=N-R_6$ - group (wherein  $R_1$ ,  $R_1'$ ,  $n$  and  $R_6$  are as defined above,  $R_1''$  is the same as or different from  $R_1$  and has the same meaning as that of  $R_1$ ),

a  $R_1-(O)_n-N=CR_1'-NR_2-R_6$ - group (wherein  $R_1$ ,  $n$ ,  $R_1'$ ,  $R_2$  and  $R_6$  are as defined above),

10 a  $R_2-B_3-NR_1-CO-NR_1'-R_6$ - group (wherein  $R_2$ ,  $B_3$ ,  $R_1$ ,  $R_1'$  and  $R_6$  are as defined above),

a  $D_2-CO-NR_1-R_6$ - group (wherein  $D_2$ ,  $R_1$  and  $R_6$  are as defined above) or

an  $A_2-COCO-NR_1-R_6$ - group (wherein  $A_2$ ,  $R_1$  and  $R_6$  are as defined above);

15 (9) the  $I_0$  group:

an  $A_7-B_6-N((O)_nR_1)-R_6$ - group [wherein  $A_7$  represents a C2-C10 alkenyl group optionally substituted with a halogen atom, or a C2-C10 alkynyl group, or a C3-C10 haloalkynyl group, or a  $R_2-B_1-R_4$ - group (wherein  $R_2$ ,  $B_1$  and  $R_4$  are as defined above), or a  $D_4-R_4$ - group (wherein  $D_4$  and  $R_4$  are as defined above), or a  $D_5-R_4$ - group (wherein  $D_5$  and  $R_4$  are as defined above), or a  $D_1-R_4$ - group (wherein  $D_1$  and  $R_4$  are as defined above), or a  $(b_0)-R_4$ - group (wherein  $(b_0)$  and  $R_4$  are as defined above), or a  $(c_0)-R_4$ - group (wherein  $(c_0)$  and  $R_4$  are as defined above), or a  $D_2-R_4$ - group (wherein  $D_2$  and  $R_4$

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25

are as defined above), or a  $D_3-R_4-$  group (wherein  $D_3$  and  $R_4$  are as defined above), or an  $A_4-SO_2-R_4-$  group (wherein  $A_4$  and  $R_4$  are as defined above), or an  $A_2-CO-R_4-$  group (wherein  $A_2$  and  $R_4$  are as defined above),  $B_6$  represents a carbonyl group or a thiocarbonyl group, and  $n$ ,  $R_1$  and  $R_6$  are as defined above],

an  $A_8-CS-N((O)_nR_1)-R_6-$  group [wherein  $A_8$  represents a hydrogen atom or a C1-C10 alkyl group optionally substituted with a halogen atom, and  $n$ ,  $R_1$  and  $R_4$  are as defined above],

an  $A_{7'}-B_{2'}-B_3-N((O)_nR_1)-R_6-$  group [wherein  $A_{7'}$  represents a C3-C10 alkenyl group optionally substituted with a halogen atom, or a C3-C10 alkynyl group optionally substituted with a halogen atom, or a  $R_2-B_1-R_{4'}-$  group (wherein  $R_2$  and  $B_1$  are as defined above, and  $R_{4'}$  represents a C2-C10 alkylene group), or a  $D_4-R_{4'}-$  group (wherein  $D_4$  and  $R_{4'}$  are as defined above), or a  $D_1-R_{4'}-$  group (wherein  $D_1$  and  $R_{4'}$  are as defined above), or a  $(b_0)-R_{4'}-$  group (wherein  $(b_0)$  and  $R_{4'}$  are as defined above), or a  $(c_0)-R_{4'}-$  group (wherein  $(c_0)$  and  $R_{4'}$  are as defined above), or a  $D_2-R_4-$  group (wherein  $D_2$  and  $R_4$  are as defined above), or a  $D_3-R_{4'}-$  group (wherein  $D_3$  and  $R_{4'}$  are as defined above), or an  $A_2-CO-R_4-$  group (wherein  $A_2$  and  $R_4$  are as defined above),  $B_{2'}$  represents an oxy group, a thio group or a  $-N((O)_{n'}R_{1'})-$  group (wherein  $n'$  is the same as or different from  $n$  and

has the same meaning as that of  $n$ , and  $R_1'$  is as defined above), and  $B_3$ ,  $n$ ,  $R_1$  and  $R_6$  are as defined above],

an  $A_8'-B_2'-CS-N((O)_nR_1)-R_6-$  group [wherein  $A_8'$  represents a C1-C10 alkyl group or a C2-C10 haloalkyl group,  $B_2'$  is as defined above, and  $n$ ,  $R_1$  and  $R_6$  are as defined above],

an  $A_8'-S-B_3'-N((O)_nR_1)-R_6-$  group [wherein  $A_8'$ ,  $n$ ,  $R_1$  and  $R_6$  are as defined above, and  $B_3'$  represents a carbonyl group or a sulfonyl group] or

an  $A_7''-SO_2-N((O)_nR_1)-R_6-$  group [wherein  $A_7''$  represents a C2-C10 alkenyl group, or a C3-C10 alkenyl group substituted with a halogen atom, or a C3-C10 alkynyl group optionally substituted with a halogen atom, or a  $R_2-B_1-R_4'-$  group (wherein  $R_2$ ,  $B_1$  and  $R_4'$  are as defined above), or a  $D_4-R_4'-$  group (wherein  $D_4$  and  $R_4'$  are as defined above), or a  $D_5-R_4-$  group (wherein  $D_5$  and  $R_4$  are as defined above), or a  $D_1-R_4'-$  group (wherein  $D_1$  and  $R_4'$  are as defined above), or a  $(b_0)-R_4'-$  group (wherein  $(b_0)$  and  $R_4'$  are as defined above), or a  $(c_0)-R_4'-$  group (wherein  $(c_0)$  and  $R_4'$  are as defined above), or a  $D_2-R_4-$  group (wherein  $D_2$  and  $R_4$  are as defined above), or a  $NO_2-R_4-$  group (wherein  $R_4$  is as defined above), or an  $A_2-CO-R_4-$  group (wherein  $A_2$  and  $R_4$  are as defined above), and  $n$ ,  $R_1$  and  $R_6$  are as defined above];

(10) the  $J_0$  group:

an  $A_7-CO-$  group (wherein  $A_7$  is as defined above),

an  $A_9$ -CS- group (wherein  $A_9$  represents  $A_7$  or  $A_8$ ),

an  $A_9'(O)_mN=C(A_9)$ - group (wherein  $A_9'$  represents  $A_7'$  or  $A_8'$ , and  $m$  and  $A_9$  are as defined above),

a  $D_2$ -CO- group (wherein  $D_2$  is as defined above),

5 an  $A_2$ -COCO- group (wherein  $A_2$  is as defined above),

an  $A_9$ -CO- $B_1'$ - $R_6$ - group (wherein  $A_9$  and  $R_6$  are as defined above, and  $B_1'$  represents an oxy group or a thio group, provided that  $A_9$  is not  $A_8$  when  $B_1'$  is an oxy group),

10 an  $A_9$ -CS- $B_1'$ - $R_6$ - group (wherein  $A_9$ ,  $B_1'$  and  $R_6$  are as defined above),

an  $A_7''$ -SO<sub>2</sub>- $B_1'$ - $R_6$ - group (wherein  $A_7''$ ,  $B_1'$  and  $R_6$  are as defined above),

an  $A_8$ -SO<sub>2</sub>- $B_1'$ - $R_6$ - group (wherein  $A_8$ ,  $B_1'$  and  $R_6$  are as defined above, provided that  $A_8$  is not a hydrogen atom),

15 an  $A_9'$ - $B_2'$ - $B_3$ - $B_1'$ - $R_6$ - group (wherein  $A_9'$ ,  $B_2'$ ,  $B_3$ ,  $B_1'$  and  $R_6$  are as defined above), or

a C<sub>2</sub>-C<sub>10</sub> alkenyl group substituted with a  $(b_0)$ - group (wherein  $(b_0)$  is as defined above) or a  $(c_0)$ - group (wherein  $(c_0)$  is as defined above);

20 (11) the  $K_0$  group: an  $A_{10}$ -N((O)<sub>n</sub> $R_1$ )-CO- $R_6$ - group

wherein  $A_{10}$  represents a hydrogen atom (provided that  $n$  is not 0), an  $A_7''$ -SO<sub>2</sub>- group (wherein  $A_7''$  is as defined above), an  $A_8$ -SO<sub>2</sub>- group (wherein  $A_8$  is as defined above, provided that  $A_8$  is not a hydrogen atom), an  $A_9'O$ - group

25 (wherein  $A_9'$  is as defined above, provided that  $n$  is not 1),



an  $A_9'$ - group (wherein  $A_9'$  is as defined above, provided that  $A_8'$  is excluded when  $n$  is 0), a  $R_2OCH_2$ - group (wherein  $R_2$  is as defined above), an  $A_2-CO-R_4$ - group (wherein  $A_2$  and  $R_4$  are as defined above) or an  $A_2-CO-CH(CH_2CO-A_2)$ - group  
 5 (wherein  $A_2$  is as defined above), and  $n$ ,  $R_1$  and  $R_6$  are as defined above;

(12) the  $L_0$  group:

an  $A_{10}'-N((O)_nR_1)-SO_2-R_6$ - group [wherein  $A_{10}'$  represents a hydrogen atom (provided that  $n$  is not 0), an  $A_9'O$ - group  
 10 (wherein  $A_9'$  is as defined above, provided that  $n$  is not 1), an  $A_9'$ - group (wherein  $A_9'$  is as defined above, provided that  $A_8'$  is excluded when  $n$  is 0), a  $R_2-CO$ - group (wherein  $R_2$  is as defined above), an  $A_2-CO-R_4$ - group (wherein  $A_2$  and  $R_4$  are as defined above) or an  $A_2-CO-CH(CH_2CO-A_2)$ - group  
 15 (wherein  $A_2$  is as defined above), and  $n$ ,  $R_1$  and  $R_6$  are as defined above],

an  $A_9''R_1N-SO_2-N((O)_nR_1')-R_6$ - group [wherein  $A_9''$  represents a hydrogen atom or an  $A_9'$ - group (wherein  $A_9'$  is as defined above), and  $R_1$ ,  $n$ ,  $R_1'$  and  $R_6$  are as defined  
 20 above] or

a  $(b_0)-SO_2-N((O)_nR_1')-R_6$ - group [wherein  $(b_0)$ ,  $n$ ,  $R_1'$  and  $R_6$  are as defined above];

(13) the  $M_0$  group:

a  $R_1(R_2S)C=N-R_6$ - group (wherein  $R_1$ ,  $R_2$  and  $R_6$  are as  
 25 defined above),

a  $R_2B(R_2'B')C=N-R_6-$  group (wherein  $R_2$  and  $R_6$  are as defined above,  $R_2'$  is the same as or different from  $R_2$  and has the same meaning as that of  $R_2$ , and  $B$  and  $B'$  are the same or different and represent an oxy group or a thio group),

a  $R_1R_1'N-(R_2S)C=N-R_6-$  group (wherein  $R_1$ ,  $R_1'$ ,  $R_2$  and  $R_6$  are as defined above),

a  $R_1N=C(SR_2)-NR_2'-R_6-$  group (wherein  $R_1$ ,  $R_2$ ,  $R_2'$  and  $R_6$  are as defined above) or

a  $R_1(R_1'O)N-R_6-$  group (wherein  $R_1$ ,  $R_1'$  and  $R_6$  are as defined above);

(14) the  $N_0$  group: a  $A_{11}-P(=O)(OR_1')-R_4-$  group

wherein  $A_{11}$  represents a  $R_1-$  group (wherein  $R_1$  is as defined above), a  $R_1O-R_6-$  group (wherein  $R_1$  and  $R_6$  are as defined above) or a  $R_1OCO-CHR_0-$  group (wherein  $R_1$  and  $R_0$  are as defined above), and  $R_1'$  and  $R_4$  are as defined above;

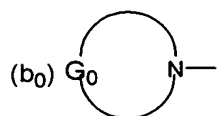
III. in  $(Y_{A0})_q$ ,  $Y_{A0}$  is a substituent on a carbon atom and represents a group included in the following  $X_0$  group and  $Y_0$  group,  $q$  represents 0, 1, 2, 3 or 4, the sum of  $p$  (wherein  $p$  is as defined above) and  $q$  is 5 or less,  $Y_{A0}$ s are the same as or different when  $q$  is 2 or more, and the adjacent two same or different  $Y_{A0}$ s may form a group included in the  $Z_0$  group to be fused to the A ring when  $q$  is 2 or more;

(1) the  $X_0$  group: a  $M_a$ - group, wherein  $M_a$  represents a  $R_b$ - group (wherein  $R_b$  represents a C1-C10 alkyl group optionally substituted with a halogen atom), a halogen atom, a nitro group, a cyano group, a hydroxy group, a  $R_c$ - $B_a$ - $R_d$ - group (wherein  $R_c$  represents a C1-C10 alkyl group optionally substituted with a halogen atom,  $B_a$  represents an oxy group, a thio group, a sulfinyl group or a sulfonyl group, and  $R_d$  represents a single bond or a C1-C10 alkylene group), a  $HOR_d$ - group (wherein  $R_d$  is as defined above), a  $R_e$ -CO- $R_d$ - group (wherein  $R_e$  represents a hydrogen atom, or a C1-C10 alkyl group optionally substituted with a halogen atom, and  $R_d$  is as defined above), a  $R_e$ -CO-O- $R_d$ - group (wherein  $R_e$  and  $R_d$  are as defined above), a  $R_e$ O-CO- $R_d$ - group (wherein  $R_e$  and  $R_d$  are as defined above), a HO-CO-CH=CH- group, a  $R_eR_{e'}N$ - $R_d$ - group (wherein  $R_e$  and  $R_{e'}$  are the same or different,  $R_e$  is as defined above,  $R_{e'}$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_e$ -CO- $NR_{e'}$ - $R_d$ - group (wherein  $R_e$ ,  $R_{e'}$  and  $R_d$  are as defined above), a  $R_b$ O-CO-N( $R_e$ )- $R_d$ - group (wherein  $R_b$ ,  $R_e$  and  $R_d$  are as defined above), a  $R_eR_{e'}N$ -CO- $R_d$ - group (wherein  $R_e$ ,  $R_{e'}$  and  $R_d$  are as defined above), a  $R_eR_{e'}N$ -CO- $NR_{e''}$ - $R_d$ - group (wherein  $R_e$ ,  $R_{e'}$  and  $R_{e''}$  are the same or different,  $R_e$  and  $R_{e'}$  are as defined above,  $R_{e''}$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_eR_{e'}N$ -C(=NR $_{e''}$ )-NR $_{e'''}$ - $R_d$ - group (wherein  $R_e$ ,  $R_{e'}$ ,  $R_{e''}$  and  $R_{e'''}$  are the same or different,

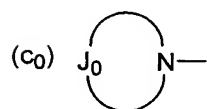
$R_e$ ,  $R_e'$  and  $R_e''$  are as defined above,  $R_e'''$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_b$ -SO<sub>2</sub>-NR<sub>e</sub>-R<sub>d</sub>- group (wherein  $R_b$ ,  $R_e$  and  $R_d$  are as defined above), a  $R_e R_e' N$ -SO<sub>2</sub>-R<sub>d</sub>- group (wherein  $R_e$ ,  $R_e'$  and  $R_d$  are as defined above), a C<sub>2</sub>-C<sub>10</sub> alkenyl group or a C<sub>2</sub>-C<sub>10</sub> alkynyl group;

(2) the  $Y_0$  group: a  $M_{b0}$ -R<sub>d</sub>- group, wherein  $M_{b0}$  represents a  $M_{c0}$ - group

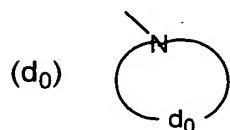
[wherein  $M_{c0}$  represents a  $M_{d0}$ -R<sub>d</sub>'- group [wherein  $M_{d0}$  represents a 6 to 10-membered aryl group optionally substituted with a  $M_a$ - group (wherein  $M_a$  is as defined above), a 5 to 10-membered heteroaryl group optionally substituted with a  $M_a$ - group (wherein  $M_a$  is as defined above), a 3 to 10-membered cyclic hydrocarbon or heterocyclic group which is optionally substituted with a  $M_a$ - group (wherein  $M_a$  is as defined above) and which optionally contains an unsaturated bond, or a (b<sub>0</sub>)- group



(wherein (b<sub>0</sub>) forms as defined above), a (c<sub>0</sub>)- group



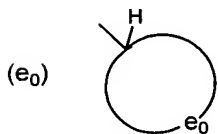
(wherein (c<sub>0</sub>) forms as defined above), a (d<sub>0</sub>)-group



{wherein  $d_0$  forms a 5 to 12-membered hydrocarbon ring which

is substituted with a carbonyl group or a thiocarbonyl group and further which may be optionally substituted with an oxy group, a thio group, a  $-NR_1-$  group (wherein  $R_1$  is as defined above), a sulfinyl group or a sulfonyl group} or a

5  $(e_0)-$  group



{wherein  $e_0$  forms a 5 to 12-membered hydrocarbon ring optionally substituted with a carbonyl group, a thiocarbonyl group, an oxy group, a thio group, a  $-NR_1-$  group (wherein  $R_1$  is as defined above), a sulfinyl group or a sulfonyl group}, and  $R_d'$  is the same as or different from  $R_d$  and has the same meaning as  $R_d$  has]],

a  $M_{c0}-B_a-$  group (wherein  $M_{c0}$  and  $B_a$  are as defined above), a  $M_{c0}-CO-$  group (wherein  $M_{c0}$  is as defined above), a  $M_{c0}-CO-O-$  group (wherein  $M_{c0}$  is as defined above), a  $M_{c0}O-CO-$  group (wherein  $M_{c0}$  is as defined above), a  $M_{c0}R_eN-$  group (wherein  $M_{c0}$  and  $R_e$  are as defined above), a  $M_{c0}-CO-NR_e-$  group (wherein  $M_{c0}$  and  $R_e$  are as defined above), a  $M_{c0}O-CO-NR_e-$  group (wherein  $M_{c0}$  and  $R_e$  are as defined above), a  $M_{c0}R_eN-CO-$  group (wherein  $M_{c0}$  and  $R_e$  are as defined above), a  $M_{c0}R_eN-CO-NR_e'-$  group (wherein  $M_{c0}$ ,  $R_e$  and  $R_e'$  are as defined above), a  $M_{c0}R_eN-C(=NR_e')-NR_e''-$  group (wherein  $M_{c0}$ ,  $R_e$ ,  $R_e'$  and  $R_e''$  are as defined above), a  $M_{c0}-SO_2-NR_e-$  group (wherein  $M_{c0}$  and  $R_e$  are as defined above) or a  $M_{c0}R_eN-SO_2-$  group (wherein  $M_{c0}$

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and  $R_e$  are as defined above), and

$R_d$  is as defined above;

(3) the  $Z_0$  group: a 5 to 12-membered cyclic hydrocarbon or heterocyclic ring optionally substituted with a halogen atom, a C1-C10 alkoxy group, a C3-C10 alkenyloxy group, a C3-C10 alkynyloxy group, a carbonyl group, a thiocarbonyl group, an oxy group, a thio group, a sulfinyl group or a sulfonyl group, which is an aromatic or nonaromatic and monocyclic or fused ring and which is fused to the A ring;

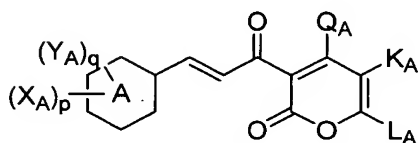
IV.  $Q_{A0}$  represents a hydroxyl group, a  $(b_0)$ - group (wherein  $(b_0)$  is as defined above), an  $A_9-B_6-B_c$ - group [wherein  $A_9$  and  $B_6$  are as defined above, and  $B_c$  represent an oxy group or a  $-N((O)_mR_1)-$  group (wherein  $m$  and  $R_1$  are as defined above), provided that  $B_c$  is not a sulfonyl group when  $A_9$  is a hydrogen atom], an  $A_7''-SO_2-B_c$ - group (wherein  $A_7''$  and  $B_c$  are as defined above), an  $A_8-SO_2-B_c$ - group (wherein  $A_8$  and  $B_c$  are as defined above, provided that  $A_8$  is not a hydrogen atom), a  $R_1R_1'N-SO_2-B_c$ - group (wherein  $R_1$ ,  $R_1'$  and  $B_c$  are as defined above), a  $(b_0)-SO_2-B_c$ - group (wherein  $(b_0)$  and  $B_c$  are as defined above), an  $A_9'-B_c$ - group (wherein  $A_9'$  and  $B_c$  are as defined above), a  $D_5-R_4-B_c$ - group (wherein  $D_5$ ,  $R_4$  and  $B_c$  are as defined above), a  $M_{c0}-B_3-B_c$ - group (wherein  $M_{c0}$ ,  $B_3$  and  $B_c$  are as defined above) or a  $M_{c0}-B_c$ - group (wherein  $M_{c0}$  and  $B_c$  are as defined above);

V.  $K_{A0}$  represents a hydrogen atom, a halogen atom, or a C10 alkyl group,  $L_{A0}$  represents a hydrogen atom, or a  $M_{b0}$ -group ( $M_{b0}$  is as defined above), or  $K_{A0}$  and  $L_{A0}$  may form a C1-C10 alkylene group, or a C1-C10 alkenylene group optionally substituted with single or the same or different plural  $M_a$  groups; and

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

3. A cinnamoyl compound represented by the formula (III):

(III)



wherein

I. A represents a benzene ring or a pyridine ring;

II. in  $(X_A)_p$ ,  $X_A$  is a substituent on a carbon atom and

represents a group included in any group or the following A

to N groups, p represents 1, 2, 3, 4 or 5, and,  $X_A$ s are the same or different when p is 2 or more,

(1) the A group:

a  $D_1-R_4-$  group, wherein  $D_1$  represents a  $(R_1-(O)_k-(A_1N-(O)_{k'}- group [wherein  $R_1$  represents a hydrogen atom, or a C1-C10 alkyl group, or a C2-C10 alkyl group substituted with a halogen atom or a  $R_2-B_1-$  group (wherein  $R_2$  represents a C1-C10 alkyl group, a C3-C10 alkenyl group or a C3-C10 alkynyl group, and  $B_1$  represents an oxy group, a thio group, a sulfinyl group or a sulfonyl group), or a C3-C10 alkenyl group, or a C3-C10 alkynyl group, k represents 0 or 1,  $A_1$  represents a  $R_3-(CHR_0)_m-(B_2-B_3)_{m'}-$  group {wherein  $R_3$  represents a hydrogen atom, or a C1-C10 alkyl group optionally substituted with a halogen atom or a  $R_2-B_1-$  group (wherein  $R_2$  and  $B_1$  are as defined above), or a C2-C10 alkenyl group, or a C2-C10 alkynyl group,  $R_0$  represents a hydrogen atom, a C1-C10 alkyl group or a C2-C10 haloalkyl group, m represents 0 or 1,  $B_2$  represents a single bond, an oxy group, a thio group or a  $-N((O)_nR_1')-$  group (wherein  $R_1'$  is the same as or different from  $R_1$  and has the same meaning as  $R_1$  has, and n represents 0 or 1),  $B_3$  represents a carbonyl group, a thiocarbonyl group or a sulfonyl group,  $m'$  represents 0 or 1, and when  $B_3$  is a sulfonyl group, it does not occur that m is 0 and  $R_3$  is a hydrogen atom at the same time}, and  $k'$  represents 0 or 1], and  $R_4$$



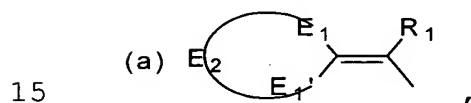
represents a C1-C10 alkylene group, provided that a  $R_0'R_0''N-R_4$ -group (wherein  $R_0'$  and  $R_0''$  are the same as or different from  $R_0$  and has the same meaning as  $R_0$  has, and  $R_4$  is as defined above) is excluded,

5 a  $D_2-R_4$ - group, wherein  $D_2$  represents a cyano group, a  $R_1R_1'NC(=N-(O)_n-A_1)$ -group (wherein  $R_1$ ,  $R_1'$ ,  $n$  and  $A_1$  are as defined above), an  $A_1N=C(-OR_2)$ -group (wherein  $A_1$  and  $R_2$  are as defined above) or a  $NH_2-CS$ -group, and  $R_4$  is as defined above,

10 a  $D_3-R_4$ - group, wherein  $D_3$  represents a nitro group or a  $R_1OSO_2$ - group (wherein  $R_1$  is as defined above), and  $R_4$  is as defined above, or

a  $R_1OSO_2$ - group, wherein  $R_1$  is as defined above;

(2) the B group: an (a)-group

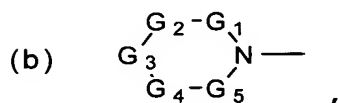


in (a),  $E_1$  and  $E_1'$  represent a methylene group optionally substituted with a C1-C10 alkyl group or a C1-C10 alkoxy group, or a carbonyl group, provided that  $E_1$  and  $E_1'$  are not a carbonyl group at the same time,  $E_2$  represents a C2-C10 alkylene group optionally substituted with an oxy group, a thio group, a sulfinyl group, a sulfonyl group or a -  
20  $NR_1'$ - group (wherein  $R_1'$  is as defined above), or a C3-C10 alkenylene group optionally substituted with an oxy group, a thio group, a sulfinyl group, a sulfonyl group or a -

$\text{NR}_1'$ - group (wherein  $\text{R}_1'$  is as defined above), and  $\text{R}_1$  is as defined above;

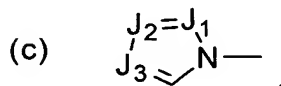
(3) the C group: a C2-C10 alkenyl group substituted with a halogen atom, a  $\text{R}_2\text{-B}_1$ - group (wherein  $\text{R}_2$  and  $\text{B}_1$  are as defined above), a  $\text{D}_4\text{-R}_4$ - group [wherein  $\text{D}_4$  represents a hydroxyl group or an  $\text{A}_1\text{-O}$ - group (wherein  $\text{A}_1$  is as defined above), and  $\text{R}_4$  is as defined above], a  $\text{D}_5$ - group [wherein  $\text{D}_5$  represents an  $\text{O}=\text{C}(\text{R}_3)$ - group (wherein  $\text{R}_3$  is as defined above), an  $\text{A}_1\text{-(O)}_n\text{-N}=\text{C}(\text{R}_3)$ - group (wherein  $\text{A}_1$ ,  $n$  and  $\text{R}_3$  are as defined above), a  $\text{R}_1\text{-B}_0\text{-CO-R}_4\text{-(O)}_n\text{-N}=\text{C}(\text{R}_3)$ - group {wherein  $\text{R}_1$ ,  $\text{R}_4$ ,  $n$  and  $\text{R}_3$  are as defined above, and  $\text{B}_0$  represents an oxy group, a thio group or a  $\text{-N((O)}_m\text{R}_1')$ - group (wherein  $\text{R}_1'$  and  $m$  are as defined above)}, a  $\text{D}_2\text{-R}_4\text{-(O)}_n\text{-N}=\text{C}(\text{R}_3)$ - group (wherein  $\text{D}_2$ ,  $\text{R}_4$ ,  $n$  and  $\text{R}_3$  are as defined above) or a  $\text{R}_1\text{A}_1\text{N-N}=\text{C}(\text{R}_3)$ - group (wherein  $\text{R}_1$ ,  $\text{A}_1$  and  $\text{R}_3$  are as defined above)], a  $\text{R}_1\text{A}_1\text{N-O-R}_4$ - group (wherein  $\text{R}_1$ ,  $\text{A}_1$  and  $\text{R}_4$  are as defined above), a  $\text{R}_1\text{ (A}_1\text{-(O)}_n\text{)-N}$ - group (wherein  $\text{R}_1$ ,  $\text{A}_1$  and  $n$  are as defined above), a  $\text{D}_2$ - group (wherein  $\text{D}_2$  is as defined above) or a  $\text{D}_3$ - group (wherein  $\text{D}_3$  is as defined above);

(4) the D group: a C2-C10 alkynyl group substituted with a (b)- $\text{R}_4$ - group [wherein, in (b)



$\text{G}_1$ ,  $\text{G}_2$ ,  $\text{G}_4$  and  $\text{G}_5$  represent a methylene group which is

connected with the adjacent atom via a single bond and which may be optionally substituted with a methyl group, or a methine group which is connected with the adjacent atom via a double bond and which may be optionally substituted with a methyl group, and  $G_3$  represents a single bond, a double bond, a C1-C10 alkylene group optionally substituted with a methyl group, an oxy group, a thio group, a sulfinyl group, a sulfonyl group or a  $-NR_1-$  group (wherein  $R_1$  is as defined above), or a C2-C10 alkenylene group optionally substituted with a methyl group, an oxy group, a thio group, a sulfinyl group, a sulfonyl group or a  $-NR_1-$  group (wherein  $R_1$  is as defined above); and  $R_4$  is as defined above], a (c)- $R_4-$  group (wherein, in (c)



$J_1$ ,  $J_2$  and  $J_3$  are the same or different, and represent a methine group optionally substituted with a methyl group, or a nitrogen atom; and  $R_4$  is as defined above), a halogen atom, a  $R_2-B_1-R_4-$  group (wherein  $R_2$ ,  $B_1$  and  $R_4$  are as defined above), a  $D_4-R_4-$  group (wherein  $D_4$  and  $R_4$  are as defined above), a  $D_5-$  group (wherein  $D_5$  is as defined above), a  $D_1-R_4-$  group (wherein  $D_1$  and  $R_4$  are as defined above), a  $D_2-$  group (wherein  $D_2$  is as defined above) or a  $D_3-R_4-$  group (wherein  $D_3$  and  $R_4$  are as defined above);

(5) the E group: an  $A_2-CO-R_5-$  group, provided that  $R_5$

is not a vinylene group when  $A_2$  is a hydroxyl group,  
wherein  $A_2$  represents

(i) an  $A_3-B_4-$  group

wherein  $A_3$  represents a hydrogen atom, or a C1-C10  
5 alkyl group, or a C2-C10 haloalkyl group, or a C2-C10  
alkenyl group optionally substituted with a halogen atom,  
or a C3-C10 alkynyl group optionally substituted with a  
halogen atom, or  $R_a-(R_4)_m-$  group (wherein  $R_a$  represents a  
phenyl group, a pyridyl group, a furyl group or a thienyl  
10 group, which may be optionally substituted with a halogen  
atom, a C1-C10 alkyl group, a C1-C10 alkoxy group or a  
nitro group, and  $R_4$  and  $m$  are as defined above), or a C1-  
C10 alkyl group substituted with a (b)- $R_4-$  group (wherein  
(b) and  $R_4$  are as defined above), a (c)- $R_4-$  group (wherein  
15 (c) and  $R_4$  are as defined above), a  $R_2-B_1-R_4-$  group (wherein  
 $R_2$ ,  $B_1$  and  $R_4$  are as defined above), a  $D_4-R_4-$  group (wherein  
 $D_4$  and  $R_4$  are as defined above), a  $D_5-$  group (wherein  $D_5$  is  
as defined above), a  $D_1-R_4-$  group (wherein  $D_1$  and  $R_4$  are as  
defined above), a  $D_2-$  group (wherein  $D_2$  is as defined  
20 above), a  $D_3-R_4-$  group (wherein  $D_3$  and  $R_4$  are as defined  
above) or an  $A_4-SO_2-R_4-$  group { wherein  $A_4$  represents a (b)-  
group (wherein (b) is as defined above), a (c)- group  
(wherein (c) is as defined above) or a  $R_1R_1'N-$  group  
(wherein  $R_1$  and  $R_1'$  are as defined above), and  $R_4$  is as  
25 defined above}, and

$B_4$  represents an oxy group, a thio group or a -  
 $N((O)_mR_1)$ - group (wherein  $R_1$  and  $m$  are as defined above),  
 provided that  $A_3$  is not a hydrogen atom when  $B_4$  is a thio  
 group,

5 (ii) a  $R_1-B_4-CO-R_4-B_4'$ - group

wherein  $R_1$ ,  $B_4$  and  $R_4$  are as defined above,  $B_4'$  is the  
 same as or different from  $B_4$  and has the same meaning as  $B_4$   
 has, provided that  $R_2$  is not a hydrogen atom when  $B_4$  is a  
 thio group, or

10 a  $D_2-R_4-B_4$ -group, wherein  $D_2$ ,  $R_4$  and  $B_4$  are as defined  
 above,

(iii) a  $R_2-SO_2-NR_1$ - group

wherein  $R_2$  is as defined above, provided that a  
 hydrogen atom is excluded; and  $R_1$  is as defined above,

15 (iv) a (b)- group, wherein (b) is as defined above,

(v) a (c)- group, wherein (c) is as defined above, or

(vi) a  $R_1A_1N-NR_1'$ - group, wherein  $R_1$ ,  $A_1$  and  $R_1'$  are as  
 defined above, and

$R_5$  represents a C2-C10 alkenylene group optionally

20 substituted with a halogen atom, or a C2-C10 alkynylene  
 group;

(6) the F group: an  $A_5-B_5-R_6$ - group

wherein  $A_5$  represents a C2-C10 alkyl group substituted  
 with a  $D_4$ - group (wherein  $D_4$  is as defined above), a  $D_1$ -  
 25 group (wherein  $D_1$  is as defined above), a  $D_3$ - group

(wherein  $D_3$  is as defined above) or an  $A_4-SO_2-$  group  
 (wherein  $A_4$  is as defined above), or a C1-C10 alkyl group  
 substituted with a  $R_2-B_1-$  group (wherein  $R_2$  and  $B_1$  are as  
 defined above), a  $D_2-$  group (wherein  $D_2$  is as defined  
 5 above), a  $D_5-$  group (wherein  $D_5$  is as defined above) or an  
 $A_2-CO-$  group (wherein  $A_2$  is as defined above),  $B_5$  represents  
 a  $B_1-$  group (wherein  $B_1$  is as defined above) or a  $-NA_1-$   
 group (wherein  $A_1$  is as defined above), and  $R_6$  represents a  
 single bond or a C1-C10 alkylene group;

10 (7) the G group: an  $A_6-B_5-R_6-$  group

wherein  $A_6$  represents an (a)- $R_4-$  group (wherein (a)  
 and  $R_4$  are as defined above), or a C2-C10 alkenyl group, or  
 a C2-C10 alkynyl group, or a C2-C10 alkenyl group  
 substituted with a halogen atom, a  $R_2-B_1-$  group (wherein  $R_2$   
 15 and  $B_1$  are as defined above), a  $D_5-$  group (wherein  $D_5$  is as  
 defined above), a  $D_2-$  group (wherein  $D_2$  is as defined  
 above) or an  $A_2-CO-$  group (wherein  $A_2$  is as define above),  
 or a C2-C10 alkynyl group substituted with a halogen atom,  
 a  $R_2-B_1-$  group (wherein  $R_2$  and  $B_1$  are as defined above), a  
 20  $D_5-$  group (wherein  $D_5$  is as defined above), a  $D_2-$  group  
 (wherein  $D_2$  is as defined above) or an  $A_2-CO-$  group  
 (wherein  $A_2$  is as defined above), or a C3-C10 alkenyl group  
 substituted with a (b)- group (wherein (b) is as defined  
 above), a (c)- group (wherein (c) is as defined above), a  
 25  $D_4-$  group (wherein  $D_4$  is as defined above), a  $D_1-$  group

(wherein  $D_1$  is as defined above) or a  $D_3$ - group (wherein  $D_3$  is as defined above), or a C3-C10 alkynyl group substituted with a  $D_4$ - group (wherein  $D_4$  is as defined above), a  $D_1$ - group (wherein  $D_1$  is as defined above) or a  $D_3$ - group (wherein  $D_3$  is as defined above), and  $B_5$  and  $R_6$  are as defined above;

(8) the H group:

a  $D_2$ -N(- $(O)_n$ - $A_1$ )- $R_6$ - group (wherein  $D_2$ ,  $n$ ,  $A_1$  and  $R_6$  are as defined above),

a  $D_2$ - group (wherein  $D_2$  is as defined above, provided that a cyano group is excluded),

a  $R_1$  ( $R_1'$  ( $O$ ) $_n$ )N-C $R_1''$ =N- $R_6$ - group (wherein  $R_1$ ,  $R_1'$ ,  $n$  and  $R_6$  are as defined above,  $R_1''$  is the same as or different from  $R_1$  and has the same meaning as  $R_1$  has),

a  $R_1$ -( $O$ ) $_n$ -N=C $R_1'$ -N $R_2$ - $R_6$ - group (wherein  $R_1$ ,  $n$ ,  $R_1'$ ,  $R_2$  and  $R_6$  are as defined above),

a  $R_2$ - $B_3$ -N $R_1$ -CO-N $R_1'$ - $R_6$ - group (wherein  $R_2$ ,  $B_3$ ,  $R_1$ ,  $R_1'$  and  $R_6$  are as defined above),

a  $D_2$ -CO-N $R_1$ - $R_6$ - group (wherein  $D_2$ ,  $R_1$  and  $R_6$  are as defined above) or

an  $A_2$ -COCO-N $R_1$ - $R_6$ - group (wherein  $A_2$ ,  $R_1$  and  $R_6$  are as defined above);

(9) the I group:

an  $A_7$ - $B_6$ -N(( $O$ ) $_n$  $R_1$ )- $R_6$ - group [wherein  $A_7$  represents a C2-C10 alkenyl group optionally substituted with a halogen

atom, or a C2-C10 alkynyl group, or a C3-C10 haloalkynyl group, or a R<sub>2</sub>-B<sub>1</sub>-R<sub>4</sub>- group (wherein R<sub>2</sub>, B<sub>1</sub> and R<sub>4</sub> are as defined above), or a D<sub>4</sub>-R<sub>4</sub>- group (wherein D<sub>4</sub> and R<sub>4</sub> are as defined above), or a D<sub>5</sub>-R<sub>4</sub>- group (wherein D<sub>5</sub> and R<sub>4</sub> are as defined above), or a D<sub>1</sub>-R<sub>4</sub>- group (wherein D<sub>1</sub> and R<sub>4</sub> are as defined above), or a (b)-R<sub>4</sub>- group (wherein (b) and R<sub>4</sub> are as defined above), or a (c)-R<sub>4</sub>- group (wherein (c) and R<sub>4</sub> are as defined above), or a D<sub>2</sub>-R<sub>4</sub>- group (wherein D<sub>2</sub> and R<sub>4</sub> are as defined above), or a D<sub>3</sub>-R<sub>4</sub>- group (wherein D<sub>3</sub> and R<sub>4</sub> are as defined above), or an A<sub>4</sub>-SO<sub>2</sub>-R<sub>4</sub>- group (wherein A<sub>4</sub> and R<sub>4</sub> are as defined above), or an A<sub>2</sub>-CO-R<sub>4</sub>- group (wherein A<sub>2</sub> and R<sub>4</sub> are as defined above), B<sub>6</sub> represents a carbonyl group or a thiocarbonyl group, and n, R<sub>1</sub> and R<sub>6</sub> are as defined above],

an A<sub>8</sub>-CS-N((O)<sub>n</sub>R<sub>1</sub>)-R<sub>6</sub>- group [wherein A<sub>8</sub> represents a hydrogen atom or a C1-C10 alkyl group optionally substituted with a halogen atom, and n, R<sub>1</sub> and R<sub>6</sub> are as defined above],

an A<sub>7</sub>'-B<sub>2</sub>'-B<sub>3</sub>-N((O)<sub>n</sub>R<sub>1</sub>)-R<sub>6</sub>- group [wherein A<sub>7</sub>' represents a C3-C10 alkenyl group optionally substituted with a halogen atom, or a C3-C10 alkynyl group optionally substituted with a halogen atom, or a R<sub>2</sub>-B<sub>1</sub>-R<sub>4</sub>'- group (wherein R<sub>2</sub> and B<sub>1</sub> are as defined above, and R<sub>4</sub>' represents a C2-C10 alkylene group), or a D<sub>4</sub>-R<sub>4</sub>'- group (wherein D<sub>4</sub> and R<sub>4</sub>' are as defined above), or a D<sub>1</sub>-R<sub>4</sub>'- group (wherein D<sub>1</sub>



and  $R_4'$  are as defined above), or a (b)- $R_4'$ - group (wherein (b) and  $R_4'$  are as defined above), or a (c)- $R_4'$ - group (wherein (c) and  $R_4'$  are as defined above), or a  $D_2$ - $R_4$ - group (wherein  $D_2$  and  $R_4$  are as defined above), or a  $D_3$ - $R_4'$ - group (wherein  $D_3$  and  $R_4'$  are as defined above), or an  $A_2$ -  
 5 CO- $R_4$ - group (wherein  $A_2$  and  $R_4$  are as defined above),  $B_2'$  represents an oxy group, a thio group or a  $-N((O)_n, R_1')$ - group (wherein  $n'$  is the same as or different from  $n$  and has the same meaning as  $n$  has, and  $R_1'$  is as defined above),  
 10 and  $B_3$ ,  $n$ ,  $R_1$  and  $R_6$  are as defined above],  
     an  $A_8'$ - $B_2'$ -CS- $N((O)_n R_1)$ - $R_4$ - group [wherein  $A_8'$  represents a C1-C10 alkyl group or a C2-C10 haloalkyl group,  $B_2'$  is as defined above, and  $n$ ,  $R_1$  and  $R_6$  are as defined above],  
 15      an  $A_8'$ -S- $B_3'$ - $N((O)_n R_1)$ - $R_6$ - group [wherein  $A_8'$ ,  $n$ ,  $R_1$  and  $R_6$  are as defined above, and  $B_3'$  represents a carbonyl group or a sulfonyl group] or  
     an  $A_7''$ -SO<sub>2</sub>- $N((O)_n R_1)$ - $R_6$ - group [wherein  $A_7''$  represents a C2-C10 alkenyl group, or a C3-C10 alkenyl group substituted  
 20 with a halogen atom, or a C3-C10 alkynyl group optionally substituted with a halogen atom, or a  $R_2$ - $B_1$ - $R_4'$ - group (wherein  $R_2$ ,  $B_1$  and  $R_4'$  are as defined above), or a  $D_4$ - $R_4'$ - group (wherein  $D_4$  and  $R_4'$  are as defined above), or a  $D_5$ - $R_4$ - group (wherein  $D_5$  and  $R_4$  are as defined above), or a  $D_1$ - $R_4'$ -  
 25 group (wherein  $D_1$  and  $R_4'$  are as defined above), or a (b)-

$R_4'$ - group (wherein (b) and  $R_4'$  are as defined above), or a  
 (c)- $R_4'$ - group (wherein (c) and  $R_4'$  are as defined above),  
 or a  $D_2$ - $R_4$ - group (wherein  $D_2$  and  $R_4$  are as defined above),  
 or a  $NO_2$ - $R_4$ - group (wherein  $R_4$  is as defined above), or an  
 5  $A_2$ -CO- $R_4$ - group (wherein  $A_2$  and  $R_4$  are as defined above),  
 and n,  $R_1$  and  $R_4$  are as defined above];

(10) the J group:

an  $A_7$ -CO- group (wherein  $A_7$  is as defined above),

an  $A_9$ -CS- group (wherein  $A_9$  represents  $A_7$  or  $A_8$ ),

10 an  $A_9'(O)_mN=C(A_9)$ - group (wherein  $A_9'$  represents  $A_7'$  or  
 $A_8'$ , and m and  $A_9$  are as defined above),

a  $D_2$ -CO- group (wherein  $D_2$  is as defined above),

an  $A_2$ -COCO- group (wherein  $A_2$  is as defined above),

15 an  $A_9$ -CO- $B_1'$ - $R_6$ - group (wherein  $A_9$  and  $R_6$  are as  
 defined above, and  $B_1'$  represents an oxy group or a thio  
 group, provided that  $A_9$  is not  $A_8$  when  $B_1'$  is an oxy group),

an  $A_9$ -CS- $B_1'$ - $R_6$ - group (wherein  $A_9$ ,  $B_1'$  and  $R_6$  are as  
 defined above),

20 an  $A_7''$ -SO<sub>2</sub>- $B_1'$ - $R_6$ - group (wherein  $A_7''$ ,  $B_1'$  and  $R_6$  are as  
 defined above),

an  $A_8$ -SO<sub>2</sub>- $B_1'$ - $R_6$ - group (wherein  $A_8$ ,  $B_1'$  and  $R_6$  are as  
 defined above, provided that  $A_8$  is not a hydrogen atom),

an  $A_9'$ - $B_2'$ - $B_3$ - $B_1'$ - $R_6$ - group (wherein  $A_9'$ ,  $B_2'$ ,  $B_3$ ,  $B_1'$   
 and  $R_6$  are as defined above), or

25 a C2-C10 alkenyl group substituted with a (b)- group

(wherein (b) is as defined above) or a (c)- group (wherein (c) is as defined above);

(11) the K group: an  $A_{10}-N((O)_nR_1)-CO-R_6-$  group

wherein  $A_{10}$  represents a hydrogen atom (provided that  
 5  $n$  is not 0), an  $A_7''-SO_2-$  group (wherein  $A_7''$  is as defined  
 above), an  $A_8-SO_2-$  group (wherein  $A_8$  is as defined above,  
 provided that  $A_8$  is not a hydrogen atom), an  $A_9'O-$  group  
 (wherein  $A_9'$  is as defined above, provided that  $n$  is not 1),  
 an  $A_9'-$  group (wherein  $A_9'$  is as defined above, provided  
 10 that  $A_8'$  is excluded when  $n$  is 0), a  $R_2OCH_2-$  group (wherein  
 $R_2$  is as defined above), an  $A_2-CO-R_4-$  group (wherein  $A_2$  and  
 $R_4$  are as defined above) or an  $A_2-CO-CH(CH_2CO-A_2)-$  group  
 (wherein  $A_2$  is as defined above), and  $n$ ,  $R_1$  and  $R_6$  are as  
 defined above;

15 (12) the L group:

an  $A_{10}'-N((O)_nR_1)-SO_2-R_6-$  group [wherein  $A_{10}'$  represents  
 a hydrogen atom (provided that  $n$  is not 0), an  $A_9'O-$  group  
 (wherein  $A_9'$  is as defined above, provided that  $n$  is not 1),  
 an  $A_9'-$  group (wherein  $A_9'$  is as defined above, provided  
 20 that  $A_8'$  is excluded when  $n$  is 0), a  $R_2-CO-$  group (wherein  
 $R_2$  is as defined above), an  $A_2-CO-R_4-$  group (wherein  $A_2$  and  
 $R_4$  are as defined above) or an  $A_2-CO-CH(CH_2CO-A_2)-$  group  
 (wherein  $A_2$  is as defined above), and  $n$ ,  $R_1$  and  $R_6$  are as  
 defined above],

25 an  $A_9''R_1N-SO_2-N((O)_nR_1')-R_6-$  group [wherein  $A_9''$

represents a hydrogen atom or an  $A_9'$ - group (wherein  $A_9'$  is as defined above), and  $R_1$ ,  $n$ ,  $R_1'$  and  $R_6$  are as defined above] or

5 a  $(b)-SO_2-N((O)_nR_1')-R_6-$  group [wherein  $(b)$ ,  $n$ ,  $R_1'$  and  $R_6$  are as defined above];

(13) the M group:

a  $R_1(R_2S)C=N-R_6-$  group (wherein  $R_1$ ,  $R_2$  and  $R_6$  are as defined above),

10 a  $R_2B(R_2'B')C=N-R_6-$  group (wherein  $R_2$  and  $R_6$  are as defined above,  $R_2'$  is the same as or different from  $R_2$  and has the same meaning as  $R_2$  has, and  $B$  and  $B'$  are the same or different and represent an oxy group or a thio group),

a  $R_1R_1'N-(R_2S)C=N-R_6-$  group (wherein  $R_1$ ,  $R_1'$ ,  $R_2$  and  $R_6$  are as defined above),

15 a  $R_1N=C(SR_2)-NR_2'-R_6-$  group (wherein  $R_1$ ,  $R_2$ ,  $R_2'$  and  $R_6$  are as defined above) or

a  $R_1(R_1'O)N-R_6-$  group (wherein  $R_1$ ,  $R_1'$  and  $R_6$  are as defined above);

(14) the N group: an  $A_{11}-P(=O)(OR_1')-R_4-$  group

20 wherein  $A_{11}$  represents a  $R_1-$  group (wherein  $R_1$  is as defined above), a  $R_1O-R_6-$  group (wherein  $R_1$  and  $R_6$  are as defined above) or a  $R_1OCO-CHR_0-$  group (wherein  $R_1$  and  $R_0$  are as defined above), and  $R_1'$  and  $R_4$  are as defined above;

25 III. in  $(Y_A)_q$ ,  $Y_A$  is a substituent on a carbon atom and

represents a group included in the following X group or Y group, q represents 0, 1, 2, 3 or 4, the sum of p (wherein p is as defined above) and q is 5 or less, Y<sub>As</sub> are the same or different when q is 2 or more, and the adjacent two same or different Y<sub>As</sub> together may form a group included in the Z group to be fused to the A ring when q is 2 or more,

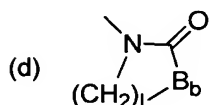
(1) the X group: a M<sub>a</sub>- group

wherein M<sub>a</sub> represents a R<sub>b</sub>- group (wherein R<sub>b</sub> represents a C1-C10 alkyl group optionally substituted with a halogen atom), a halogen atom, a nitro group, a cyano group, a R<sub>c</sub>-B<sub>a</sub>-R<sub>d</sub>- group (wherein R<sub>c</sub> represents a C1-C10 alkyl group optionally substituted with a halogen atom, B<sub>a</sub> represents an oxy group, a thio group, a sulfinyl group or a sulfonyl group, and R<sub>d</sub> represents a single bond or a C1-C10 alkylene group), a HOR<sub>d</sub>- group (wherein R<sub>d</sub> is as defined above), a R<sub>e</sub>-CO-R<sub>d</sub>- group (wherein R<sub>e</sub> represents a hydrogen atom, or a C1-C10 alkyl group optionally substituted with a halogen atom, and R<sub>d</sub> is as defined above), a R<sub>e</sub>-CO-O-R<sub>d</sub>- group (wherein R<sub>e</sub> and R<sub>d</sub> are as defined above), a R<sub>e</sub>O-CO-R<sub>d</sub>- group (wherein R<sub>e</sub> and R<sub>d</sub> are as defined above), a HO-CO-CH=CH- group, a R<sub>e</sub>R<sub>e</sub>'N-R<sub>d</sub>- group (wherein R<sub>e</sub> and R<sub>e</sub>' are the same or different, R<sub>e</sub> is as defined above, R<sub>e</sub>' has the same meaning as R<sub>e</sub> has, and R<sub>d</sub> is as defined above), a R<sub>e</sub>-CO-NR<sub>e</sub>'-R<sub>d</sub>- group (wherein R<sub>e</sub>, R<sub>e</sub>' and R<sub>d</sub> are as defined above), a R<sub>b</sub>O-CO-N(R<sub>e</sub>)-R<sub>d</sub>- group

(wherein  $R_b$ ,  $R_e$  and  $R_d$  are as defined above), a  $R_eR_e'N-CO-R_d$ -group (wherein  $R_e$ ,  $R_e'$  and  $R_d$  are as defined above), a  $R_eR_e'N-CO-NR_e''-R_d$ -group (wherein  $R_e$ ,  $R_e'$  and  $R_e''$  are the same or different,  $R_e$  and  $R_e'$  are as defined above,  $R_e''$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_eR_e'N-C(=NR_e'')-NR_e'''-R_d$ -group (wherein  $R_e$ ,  $R_e'$ ,  $R_e''$  and  $R_e'''$  are the same or different,  $R_e$ ,  $R_e'$  and  $R_e''$  are as defined above,  $R_e'''$  has the same meaning as  $R_e$  has, and  $R_d$  is as defined above), a  $R_b-SO_2-NR_e-R_d$ -group (wherein  $R_b$ ,  $R_e$  and  $R_d$  are as defined above), a  $R_eR_e'N-SO_2-R_d$ -group (wherein  $R_e$ ,  $R_e'$  and  $R_d$  are as defined above), a C2-C10 alkenyl group or a C2-C10 alkynyl group;

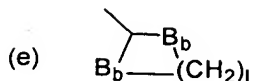
(2) the Y group: a  $M_b-R_d$ -group, wherein  $M_b$  represents a  $M_c$ -group

[wherein  $M_c$  represents a  $M_d-R_d'$ -group [wherein  $M_d$  represents a phenyl group optionally substituted with a  $M_a$ -group (wherein  $M_a$  is as defined above), a pyridyl group optionally substituted with a  $M_a$ -group (wherein  $M_a$  is as defined above), a naphthyl group optionally substituted with a  $M_a$ -group (wherein  $M_a$  is as defined above), a (b)-group (wherein (b) is as defined above), a (c)-group (wherein (c) is as defined above), a (d)-group



(wherein  $l$  is 2, 3 or 4,  $B_b$  represents an oxy group or a

thio group) or an (e)- group



(wherein  $l$  and  $B_b$  are as defined above), and  $R_d'$  is the same as or different from  $R_d$  and has the same meaning as  $R_d$  has]],

a  $M_c\text{-}B_a\text{-}$  group (wherein  $M_c$  and  $B_a$  are as defined above), a  $M_c\text{-CO-}$  group (wherein  $M_c$  is as defined above), a  $M_c\text{-CO-O-}$  group (wherein  $M_c$  is as defined above), a  $M_c\text{O-CO-}$  group (wherein  $M_c$  is as defined above), a  $M_cR_e\text{N-}$  group (wherein  $M_c$  and  $R_e$  are as defined above), a  $M_c\text{-CO-NR}_e\text{-}$  group (wherein  $M_c$  and  $R_e$  are as defined above), a  $M_c\text{O-CO-NR}_e\text{-}$  group (wherein  $M_c$  and  $R_e$  are as defined above), a  $M_cR_e\text{N-CO-}$  group (wherein  $M_c$  and  $R_e$  are as defined above), a  $M_cR_e\text{N-CO-NR}_e'\text{-}$  group (wherein  $M_c$ ,  $R_e$  and  $R_e'$  are as defined above), a  $M_cR_e\text{N-C(=NR}_e')\text{-NR}_e''\text{-}$  group (wherein  $M_c$ ,  $R_e$ ,  $R_e'$  and  $R_e''$  are as defined above), a  $M_c\text{-SO}_2\text{-NR}_e\text{-}$  group (wherein  $M_c$  and  $R_e$  are as defined above) or a  $M_cR_e\text{N-SO}_2\text{-}$  group (wherein  $M_c$  and  $R_e$  are as defined above), and  $R_d$  is as defined above;

(3) the Z group:

a  $\text{-N=C(Y}_a\text{)-Y}_a'\text{-}$  group (wherein  $Y_a$  represents a hydrogen atom, or a C1-C10 alkyl group optionally substituted with a halogen atom, or a C1-C10 alkoxy group, and  $Y_a'$  represents an oxy group, a thio group, or an imino group optionally

substituted with a C1-C10 alkyl group),

a  $-Y_b-Y_b'-Y_b''-$  group (wherein  $Y_b$  and  $Y_b''$  are the same or different, and represent a methylene group, an oxy group, a thio group, a sulfinyl group, or an imino group

5 optionally substituted with a C1-C10 alkyl group, and  $Y_b'$  represents a C1-C4 alkylene group optionally substituted with a halogen atom, or a C1-C4 alkylene group optionally having an oxo group) or

10 a  $-Y_c-O-Y_c'-O-$  group (wherein  $Y_c$  and  $Y_c'$  are the same or different, and represent a C1-C10 alkylene group);

IV.  $Q_A$  represents a hydroxyl group, a (b)- group (wherein (b) is as defined above), an  $A_9-B_6-B_c-$  group [wherein  $A_9$  and  $B_6$  are as defined above, and  $B_c$  represents an oxy group or  
15 a  $-N((O)_mR_1)-$  group (wherein  $m$  and  $R_1$  are as defined above), provided that  $B_c$  is not a sulfonyl group when  $A_9$  is a hydrogen atom], an  $A_7''-SO_2-B_c-$  group (wherein  $A_7''$  and  $B_c$  are as defined above), an  $A_8-SO_2-B_c-$  group (wherein  $A_8$  and  $B_c$  are as defined above, provided that  $A_8$  is not a hydrogen  
20 atom), a  $R_1R_1'N-SO_2-B_c-$  group (wherein  $R_1$ ,  $R_1'$  and  $B_c$  are as defined above), a (b)- $SO_2-B_c-$  group (wherein (b) and  $B_c$  are as defined above), an  $A_9'-B_c-$  group (wherein  $A_9'$  and  $B_c$  are as defined above), a  $D_5-R_c-B_c-$  group (wherein  $D_5$ ,  $R_4$  and  $B_c$  are as defined above), a  $M_c-B_3-B_c-$  group (wherein  $M_c$ ,  $B_3$  and  
25  $B_c$  are as defined above) or a  $M_c-B_c-$  group (wherein  $M_c$  and

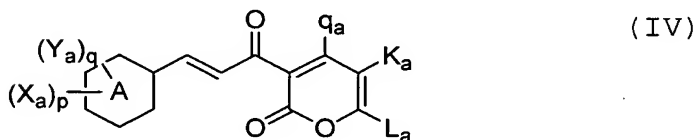


B<sub>c</sub> are as defined above);

V. K<sub>A</sub> represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, L<sub>A</sub> represents a hydrogen atom, a C1-C10 alkyl group or a M<sub>b</sub>-group (M<sub>b</sub> is as defined above), or K<sub>A</sub> and L<sub>A</sub> may form a C1-C10 alkylene group or a -C(M<sub>a</sub>')=C(M<sub>a</sub>'')-C(M<sub>a</sub>''')=C(M<sub>a</sub>''')-group (M<sub>a</sub>', M<sub>a</sub>'', M<sub>a</sub>''' and M<sub>a</sub>'''' are the same or different, are the same as or different from M<sub>a</sub>, and represent a hydrogen atom or M<sub>a</sub>) ; and

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

4. A cinnamoyl compound represented by the formula (IV):



wherein

A represents a benzene ring or a pyridine ring,

X<sub>a</sub> is a substituent on a carbon atom, and represents a

C1-C10 alkyl group substituted with a cyano group; a C1-C10  
 alkyl group substituted with a tetrahydropyran-4-ylidene  
 group; a C2-C10 alkenyl group substituted with a halogen  
 atom or a cyano group; a C2-C10 alkenyl group substituted  
 5 with a C1-C10 alkoxy carbonyl group; a C3-C10 alkynyl group  
 substituted with a hydroxyl group; an  $a_0-r_1-b-r_1'$ - group  
 {wherein  $a_0$  represents a methyl group substituted with a  
 C1-C10 alkylthio group, a methyl group substituted with a  
 C1-C10 alkylsulfinyl group, a methyl group substituted with  
 10 a C1-C10 alkylsulfonyl group, a C2-C10 alkenyl group, a C2-  
 C10 alkynyl group, a  $r_2O-CO-$  group (wherein  $r_2$  represents a  
 C1-C10 alkyl group, or a C2-C10 alkyl group substituted  
 with a hydroxyl group), a carboxyl group, a  $rr'N-CO-$  group  
 (wherein  $r$  and  $r'$  are the same or different, and represent  
 15 a hydrogen atom or a C1-C10 alkyl group), an  $a_1-NH-CO-$   
 group (wherein  $a_1$  represents a C2-C10 alkyl group  
 substituted with a C1-C10 alkoxy group), an  $a_1'-CO-$  group  
 (wherein  $a_1'$  represents a morpholino group), a  $rr'N-CH_2-$   
 group (wherein  $r$  and  $r'$  are as defined above), a  $r_0-(O)_1-$   
 20  $CONH-CH_2-$  group (wherein  $r_0$  represents a C1-C10 alkyl group,  
 and 1 represents 0 or 1), a  $r-OCH_2-$  group (wherein  $r$  is as  
 defined above), a  $r_0-CO-$  group (wherein  $r_0$  is as defined  
 above), a cyano group, or a sulfomethyl group,  $r_1$   
 represents a C1-C10 alkylene group,  $r_1'$  represents a single  
 25 bond or a C1-C10 alkylene group, and  $b$  represents an oxy

group, a thio group, a sulfinyl group, a sulfonyl group or a imino group}; an  $a_2$ -y-CO-NH- group (wherein  $a_2$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, and y represents an oxy group or an imino group); a  $r_0$ O-COCO-NH- group (wherein  $r_0$  is as defined above); an  $a_3$ -z-NH- group (wherein  $a_3$  represents a C2-C10 alkenyl group, or a C1-C10 alkyl group substituted with a C1-10 alkoxy group, a C1-C10 alkoxy carbonyl group, a carboxy group or a cyano group, and z represents a carbonyl group or a sulfonyl group); an  $a_4$ -NHCO- group (wherein  $a_4$  represents a C1-C10 alkoxy group, or a C3-C10 alkenyloxy group, or a  $r_0$ -SO<sub>2</sub>- group (wherein  $r_0$  is as defined above), or a C2-C10 alkyl group substituted with a hydroxyl group or a C1-C10 alkoxy group, or a C1-C10 alkyl group substituted with a  $r$ O-CO- group (wherein  $r$  is as defined above), a cyano group or an aminocarbonyl group, or a  $r$ O-CO-( $r$ O-COCH<sub>2</sub>)CH- group (wherein  $r$  is as defined above)); an  $a_5$ -NHSO<sub>2</sub>- group (wherein  $a_5$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group); a  $r_0$ ON=CH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHCSNH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHC(-Sr<sub>0</sub>')=N- group (wherein  $r_0$  is as defined above,  $r_0'$  is the same as the different from  $r_0$  and has the same meaning as  $r_0$  has); or a ( $r_0$ O)<sub>2</sub>P(=O)CH<sub>2</sub>- group (wherein  $r_0$  is as defined above);

25        p represents 1, 2 or 3, and when p is 2 or more, X<sub>a</sub>s

are the same or different;

$Y_a$  represents a halogen atom, a nitro group, a  $r_0\text{CO-NH-}$  group (wherein  $r_0$  is as defined above), a C1-C10 alkyl group or a C1-C10 alkoxy group;

5             $q$  represents 0, 1 or 2, and when  $q$  is 2 or more,  $Y_{as}$  are the same or different;

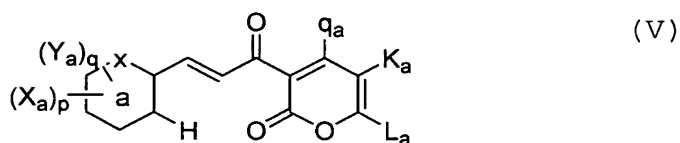
$q_a$  represents a  $r_a\text{-O-}$  group {wherein  $r_a$  represents a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, a C1-C10 alkyl group substituted  
10            with a  $r_0r_0'\text{N-CH}_2\text{-}$  group (wherein  $r_0$  and  $r_0'$  are as defined above), a  $r\text{OCH}_2\text{-}$  group (wherein  $r$  is as defined above), a  $r_0\text{-CO-}$  group (wherein  $r_0$  is as defined above), a C1-C10 alkoxy carbonyl group, a carboxy group, an aminocarbonyl group or a cyano group, or a  $r_3\text{-r}_1\text{-}$  group (wherein  $r_3$   
15            represents a phenyl group or a pyridyl group, and  $r_1$  is as defined above)}; a piperidino group; a morpholino group; or a  $r_4r_4'\text{N-}$  group (wherein  $r_4$  and  $r_4'$  are the same or different, and represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, or a  
20            C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that  $r_4$  and  $r_4'$  are not a hydrogen atom at the same time);

$K_a$  represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and  $L_a$  represents a hydrogen atom or a C1-C10 alkyl group; or  
25            C10 alkyl group; or

$K_a$  and  $L_a$  together may form a C1-C10 alkylene group or a 1,3-butadienylene group;

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

5. A cinnamoyl compound represented by the formula (V):



wherein

a represents a benzene ring or a pyridine ring;

x represents a methine group or a nitrogen atom;

$X_a$  is a substituent on a carbon atom, and represents a C1-C10 alkyl group substituted with a cyano group; a C1-C10 alkyl group substituted with a tetrahydropyran-4-ylidene group; a C2-C10 alkenyl group substituted with a halogen atom or a cyano group; a C2-C10 alkenyl group substituted with a C1-C10 alkoxy carbonyl group; a C3-C10 alkynyl group

substituted with a hydroxyl group; an  $a_0-r_1-b-r_1'$ - group  
 {wherein  $a_0$  represents a methyl group substituted with a  
 C1-C10 alkylthio group, a methyl group substituted with a  
 C1-C10 alkylsulfinyl group, a methyl group substituted with  
 5 a C1-C10 alkylsulfonyl group, a C2-C10 alkenyl group, a C2-  
 C10 alkynyl group, a  $r_2O-CO-$  group (wherein  $r_2$  represents a  
 C1-C10 alkyl group, or a C2-C10 alkyl group substituted  
 with a hydroxyl group), a carboxyl group, a  $rr'N-CO-$  group  
 (wherein  $r$  and  $r'$  are the same or different, and represent  
 10 a hydrogen atom or a C1-C10 alkyl group), an  $a_1-NH-CO-$   
 group (wherein  $a_1$  represents a C2-C10 alkyl group  
 substituted with a C1-C10 alkoxy group), an  $a_1'-CO-$  group  
 (wherein  $a_1'$  represents a morpholino group), a  $rr'N-CH_2-$   
 group (wherein  $r$  and  $r'$  are as defined above), a  $r_0-(O)_1-$   
 15  $CONH-CH_2-$  group (wherein  $r_0$  represents a C1-C10 alkyl group,  
 and  $l$  represents 0 or 1), a  $r-OCH_2-$  group (wherein  $r$  is as  
 defined above), a  $r_0-CO-$  group (wherein  $r_0$  is as defined  
 above), a cyano group, or a sulfomethyl group,  $r_1$   
 represents a C1-C10 alkylene group,  $r_1'$  represents a single  
 20 bond or a C1-C10 alkylene group, and  $b$  represents an oxy  
 group, a thio group, a sulfinyl group, a sulfonyl group or  
 a imino group}; an  $a_2-y-CO-NH-$  group (wherein  $a_2$  represents  
 a C2-C10 alkyl group substituted with a C1-C10 alkoxy group,  
 and  $y$  represents an oxy group or an imino group); a  $r_0O-$   
 25  $COCO-NH-$  group (wherein  $r_0$  is as defined above); an  $a_3-z-$

NH- group (wherein  $a_3$  represents a C2-C10 alkenyl group, or a C1-C10 alkyl group substituted with a C1-10 alkoxy group, a C1-C10 alkoxy carbonyl group, a carboxy group or a cyano group, and z represents a carbonyl group or a sulfonyl

5 group); an  $a_4$ -NHCO- group (wherein  $a_4$  represents a C1-C10 alkoxy group, or a C3-C10 alkenyloxy group, or a  $r_0$ -SO<sub>2</sub>- group (wherein  $r_0$  is as defined above), or a C2-C10 alkyl group substituted with a hydroxyl group or a C1-C10 alkoxy group, or a C1-C10 alkyl group substituted with a  $r$ O-CO- group (wherein  $r$  is as defined above), a cyano group or an aminocarbonyl group, or a  $r$ O-CO-( $r$ O-COCH<sub>2</sub>)CH- group (wherein  $r$  is as defined above)); an  $a_5$ -NHSO<sub>2</sub>- group (wherein  $a_5$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group); a  $r_0$ ON=CH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHCSNH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHC(-Sr<sub>0</sub>')=N- group (wherein  $r_0$  is as defined above,  $r_0'$  is the same as the different from  $r_0$  and has the same meaning as  $r_0$  has); or a ( $r_0$ O)<sub>2</sub>P(=O)CH<sub>2</sub>- group (wherein  $r_0$  is as defined above);

20 p represents 1, 2 or 3, and when p is 2 or more, X<sub>a</sub>s are the same or different;

Y<sub>a</sub> represents a halogen atom, a nitro group, a  $r_0$ CO-NH- group (wherein  $r_0$  is as defined above), a C1-C10 alkyl group or a C1-C10 alkoxy group;

25 q represents 0, 1 or 2, and when q is 2 or more, Y<sub>a</sub>s

are the same or different;

$q_a$  represents a  $r_a$ -O- group {wherein  $r_a$  represents a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, a C1-C10 alkyl group substituted  
 5 with a  $r_0r_0'$ -N-CH<sub>2</sub>- group (wherein  $r_0$  and  $r_0'$  are as defined above), a  $r$ OCH<sub>2</sub>- group (wherein  $r$  is as defined above), a  $r_0$ -CO- group (wherein  $r_0$  is as defined above), a C1-C10 alkoxy carbonyl group, a carboxy group, an aminocarbonyl group or a cyano group, or a  $r_3$ - $r_1$ -group (wherein  $r_3$   
 10 represents a phenyl group or a pyridyl group, and  $r_1$  is as defined above)}; a piperidino group; a morpholino group; or a  $r_4r_4'$ -N- group (wherein  $r_4$  and  $r_4'$  are the same or different, and represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, or a  
 15 C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that  $r_4$  and  $r_4'$  are not a hydrogen atom at the same time);

$t_a$  represents a  $r_b$ - group (wherein  $r_b$  is the same as or different from  $r_a$ , and has the same meaning as  $r_a$  has) or a  
 20  $r_3'$ - group (wherein  $r_3'$  is the same as or different from  $r_3$ , and has the same meaning as  $r_3$  has);

$K_a$  represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and  $L_a$  represents a hydrogen atom or a C1-C10 alkyl group; or

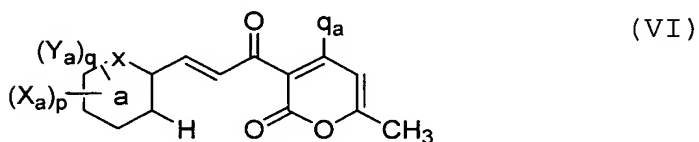
25  $K_a$  and  $L_a$  together may form a C1-C10 alkylene group or



a 1,3-butadienylene group;

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

6. A 2H-pyran-2-one compound represented by the formula (VI):



wherein

a represents a benzene ring or a pyridine ring;

x represents a methine group or a nitrogen atom;

- $X_a$  is a substituent on a carbon atom, and represents a C1-C10 alkyl group substituted with a cyano group; a C1-C10 alkyl group substituted with a tetrahydropyran-4-ylidene group; a C2-C10 alkenyl group substituted with a halogen atom or a cyano group; a C2-C10 alkenyl group substituted with a C1-C10 alkoxycarbonyl group; a C3-C10 alkynyl group

substituted with a hydroxyl group; an  $a_0-r_1-b-r_1'$ - group  
 {wherein  $a_0$  represents a methyl group substituted with a  
 C1-C10 alkylthio group, a methyl group substituted with a  
 C1-C10 alkylsulfinyl group, a methyl group substituted with  
 5 a C1-C10 alkylsulfonyl group, a C2-C10 alkenyl group, a C2-  
 C10 alkynyl group, a  $r_2O-CO-$  group (wherein  $r_2$  represents a  
 C1-C10 alkyl group, or a C2-C10 alkyl group substituted  
 with a hydroxyl group), a carboxyl group, a  $rr'N-CO-$  group  
 (wherein  $r$  and  $r'$  are the same or different, and represent  
 10 a hydrogen atom or a C1-C10 alkyl group), an  $a_1-NH-CO-$   
 group (wherein  $a_1$  represents a C2-C10 alkyl group  
 substituted with a C1-C10 alkoxy group), an  $a_1'-CO-$  group  
 (wherein  $a_1'$  represents a morpholino group), a  $rr'N-CH_2-$   
 group (wherein  $r$  and  $r'$  are as defined above), a  $r_0-(O)_1-$   
 15  $CONH-CH_2-$  group (wherein  $r_0$  represents a C1-C10 alkyl group,  
 and 1 represents 0 or 1), a  $r-OCH_2-$  group (wherein  $r$  is as  
 defined above), a  $r_0-CO-$  group (wherein  $r_0$  is as defined  
 above), a cyano group, or a sulfomethyl group,  $r_1$   
 represents a C1-C10 alkylene group,  $r_1'$  represents a single  
 20 bond or a C1-C10 alkylene group, and  $b$  represents an oxy  
 group, a thio group, a sulfinyl group, a sulfonyl group or  
 a imino group}; an  $a_2-y-CO-NH-$  group (wherein  $a_2$  represents  
 a C2-C10 alkyl group substituted with a C1-C10 alkoxy group,  
 and  $y$  represents an oxy group or an imino group); a  $r_0O-$   
 25  $COCO-NH-$  group (wherein  $r_0$  is as defined above); an  $a_3-z-$

NH- group (wherein  $a_3$  represents a C2-C10 alkenyl group, or a C1-C10 alkyl group substituted with a C1-10 alkoxy group, a C1-C10 alkoxy carbonyl group, a carboxy group or a cyano group, and z represents a carbonyl group or a sulfonyl

5 group); an  $a_4$ -NHCO- group (wherein  $a_4$  represents a C1-C10 alkoxy group, or a C3-C10 alkenyloxy group, or a  $r_0$ -SO<sub>2</sub>- group (wherein  $r_0$  is as defined above), or a C2-C10 alkyl group substituted with a hydroxyl group or a C1-C10 alkoxy group, or a C1-C10 alkyl group substituted with a  $r_0$ -CO- group (wherein r is as defined above), a cyano group or an aminocarbonyl group, or a  $r_0$ -CO-( $r_0$ -COCH<sub>2</sub>)CH- group (wherein r is as defined above)); an  $a_5$ -NHSO<sub>2</sub>- group (wherein  $a_5$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group); a  $r_0$ ON=CH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHCSNH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHC(-Sr<sub>0</sub>')=N- group (wherein  $r_0$  is as defined above,  $r_0'$  is the same as the different from  $r_0$  and has the same meaning as  $r_0$  has); or a ( $r_0$ O)<sub>2</sub>P(=O)CH<sub>2</sub>- group (wherein  $r_0$  is as defined above);

20 p represents 1, 2 or 3, and when p is 2 or more, X<sub>a</sub>s are the same or different;

Y<sub>a</sub> represents a halogen atom, a nitro group, a  $r_0$ CO-NH- group (wherein  $r_0$  is as defined above), a C1-C10 alkyl group or a C1-C10 alkoxy group;

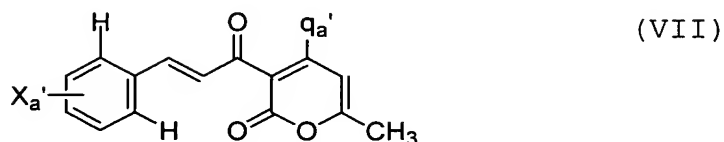
25 q represents 0, 1 or 2, and when q is 2 or more, Y<sub>a</sub>s

are the same or different;

$q_a$  represents a  $r_a-O-$  group {wherein  $r_a$  represents a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, a C1-C10 alkyl group substituted  
 5 with a  $r_0r_0'N-CH_2-$  group (wherein  $r_0$  and  $r_0'$  are as defined above), a  $rOCH_2-$  group (wherein  $r$  is as defined above), a  $r_0-CO-$  group (wherein  $r_0$  is as defined above), a C1-C10 alkoxy carbonyl group, a carboxy group, an aminocarbonyl group or a cyano group, or a  $r_3-r_1$ -group (wherein  $r_3$   
 10 represents a phenyl group or a pyridyl group, and  $r_1$  is as defined above)); a piperidino group; a morpholino group; or a  $r_4r_4'N-$  group (wherein  $r_4$  and  $r_4'$  are the same or different, and represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, or a  
 15 C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that  $r_4$  and  $r_4'$  are not a hydrogen atom at the same time);

the term "as defined above" used for the same symbols among plural substituents means that the plural  
 20 substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

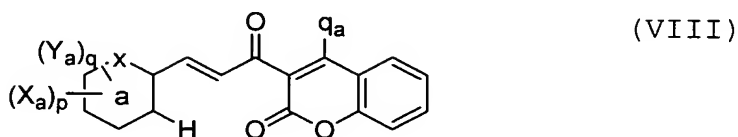
7. A 2H-pyran-2-one compound represented by the formula (VII):



wherein

$X_{a'}$  represents a C1-C10 alkyl group substituted with a  
 5 cyano group, or a C2-C10 alkenyl group substituted with a  
 halogen atom or a cyano group, or an  $a_0'$ - $r_1$ -O-group ( $a_0'$   
 represents a methyl group substituted with a C1-C10  
 alkylthio group, a C2-C10 alkenyl group, a C2-C10 alkynyl  
 group, a  $HOCH_2$ -group or a cyano group, and  $r_1$  represents a  
 10 C1-C10 alkylene group}, or an  $a_6$ -CONH-group ( $a_6$  represents  
 a C1-C10 alkyl group substituted with a C1-C10 alkoxy group,  
 or a C2-C10 alkoxy group substituted with a C1-C10 alkoxy  
 group), or an  $a_7$ -NHCO-group ( $a_7$  represents a C2-C10 alkyl  
 group substituted with a C1-C10 alkoxy group, or a C1-C10  
 15 alkyl group substituted with a C1-C10 alkoxycarbonyl  
 group);  $q_{a'}$  represents an amino group substituted with a  
 C3-C10 alkynyl group, a piperidino group, a morpholino  
 group or a  $r_{a'}$ -O-group ( $r_{a'}$  represents a hydrogen atom, a  
 C1-C10 alkyl group or a C3-C10 alkenyl group).

8. A 2H-1-benzopyran-2-one compound represented by the formula (VIII):



wherein

a represents a benzene ring or a pyridine ring;

5 x represents a methine group or a nitrogen atom;

X<sub>a</sub> is a substituent on a carbon atom, and represents a C1-C10 alkyl group substituted with a cyano group; a C1-C10 alkyl group substituted with a tetrahydropyran-4-ylidene group; a C2-C10 alkenyl group substituted with a halogen atom or a cyano group; a C2-C10 alkenyl group substituted with a C1-C10 alkoxy carbonyl group; a C3-C10 alkynyl group substituted with a hydroxyl group; an a<sub>0</sub>-r<sub>1</sub>-b-r<sub>1</sub>'- group {wherein a<sub>0</sub> represents a methyl group substituted with a C1-C10 alkylthio group, a methyl group substituted with a C1-C10 alkylsulfinyl group, a methyl group substituted with a C1-C10 alkylsulfonyl group, a C2-C10 alkenyl group, a C2-C10 alkynyl group, a r<sub>2</sub>O-CO- group (wherein r<sub>2</sub> represents a C1-C10 alkyl group, or a C2-C10 alkyl group substituted with a hydroxyl group), a carboxyl group, a rr'-N-CO- group (wherein r and r' are the same or different, and represent a hydrogen atom or a C1-C10 alkyl group), an a<sub>1</sub>-NH-CO-

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group (wherein  $a_1$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group), an  $a_1'$ -CO- group (wherein  $a_1'$  represents a morpholino group), a  $rr'$ N-CH<sub>2</sub>- group (wherein  $r$  and  $r'$  are as defined above), a  $r_0$ -(O)<sub>1</sub>-

5 CONH-CH<sub>2</sub>- group (wherein  $r_0$  represents a C1-C10 alkyl group, and  $l$  represents 0 or 1), a  $r$ -OCH<sub>2</sub>- group (wherein  $r$  is as defined above), a  $r_0$ -CO- group (wherein  $r_0$  is as defined above), a cyano group, or a sulfomethyl group,  $r_1$  represents a C1-C10 alkylene group,  $r_1'$  represents a single

10 bond or a C1-C10 alkylene group, and  $b$  represents an oxy group, a thio group, a sulfinyl group, a sulfonyl group or a imino group}; an  $a_2$ -y-CO-NH- group (wherein  $a_2$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, and  $y$  represents an oxy group or an imino group); a  $r_0$ O-

15 COCO-NH- group (wherein  $r_0$  is as defined above); an  $a_3$ -z-NH- group (wherein  $a_3$  represents a C2-C10 alkenyl group, or a C1-C10 alkyl group substituted with a C1-10 alkoxy group, a C1-C10 alkoxy carbonyl group, a carboxy group or a cyano group, and  $z$  represents a carbonyl group or a sulfonyl

20 group); an  $a_4$ -NHCO- group (wherein  $a_4$  represents a C1-C10 alkoxy group, or a C3-C10 alkenyloxy group, or a  $r_0$ -SO<sub>2</sub>- group (wherein  $r_0$  is as defined above), or a C2-C10 alkyl group substituted with a hydroxyl group or a C1-C10 alkoxy group, or a C1-C10 alkyl group substituted with a  $r$ O-CO-

25 group (wherein  $r$  is as defined above), a cyano group or an

aminocarbonyl group, or a  $rO-CO-(rO-COCH_2)CH-$  group  
 (wherein  $r$  is as defined above)); an  $a_5-NHSO_2-$  group  
 (wherein  $a_5$  represents a C2-C10 alkyl group substituted  
 with a C1-C10 alkoxy group); a  $r_0ON=CH-$  group (wherein  $r_0$   
 5 is as defined above); a  $r_0NHCSNH-$  group (wherein  $r_0$  is as  
 defined above); a  $r_0NHC(-Sr_0')=N-$  group (wherein  $r_0$  is as  
 defined above,  $r_0'$  is the same as the different from  $r_0$  and  
 has the same meaning as  $r_0$  has); or a  $(r_0O)_2P(=O)CH_2-$  group  
 (wherein  $r_0$  is as defined above);

10  $p$  represents 1, 2 or 3, and when  $p$  is 2 or more,  $X_{as}$   
 are the same or different;

$Y_a$  represents a halogen atom, a nitro group, a  $r_0CO-$   
 $NH-$  group (wherein  $r_0$  is as defined above), a C1-C10 alkyl  
 group or a C1-C10 alkoxy group;

15  $q$  represents 0, 1 or 2, and when  $q$  is 2 or more,  $Y_{as}$   
 are the same or different;

$q_a$  represents a  $r_a-O-$  group {wherein  $r_a$  represents a  
 hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group,  
 a C3-C10 alkynyl group, a C1-C10 alkyl group substituted  
 20 with a  $r_0r_0'N-CH_2-$  group (wherein  $r_0$  and  $r_0'$  are as defined  
 above), a  $rOCH_2-$  group (wherein  $r$  is as defined above), a  
 $r_0-CO-$  group (wherein  $r_0$  is as defined above), a C1-C10  
 alkoxy carbonyl group, a carboxy group, an aminocarbonyl  
 group or a cyano group, or a  $r_3-r_1$ -group (wherein  $r_3$   
 25 represents a phenyl group or a pyridyl group, and  $r_1$  is as



defined above)); a piperidino group; a morpholino group; or a  $r_4r_4'$ N- group (wherein  $r_4$  and  $r_4'$  are the same or different, and represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, or a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that  $r_4$  and  $r_4'$  are not a hydrogen atom at the same time);

$t_a$  represents a  $r_b$ - group (wherein  $r_b$  is the same as or different from  $r_a$ , and has the same meaning as  $r_a$  has) or a  $r_3'$ - group (wherein  $r_3'$  is the same as or different from  $r_3$ , and has the same meaning as  $r_3$  has);

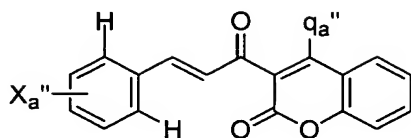
$K_a$  represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and  $L_a$  represents a hydrogen atom or a C1-C10 alkyl group; or

$K_a$  and  $L_a$  together may form a C1-C10 alkylene group or a 1,3-butadienylene group;

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

9. A 2H-1-benzopyran-2-one compound represented by the

formula (IX):

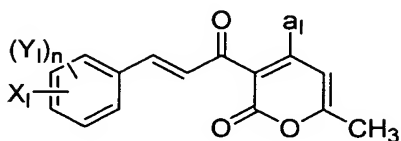


(IX)

wherein

$X_a''$  represents a C1-C10 alkoxy group substituted with a cyano group or a hydroxymethyl group, or an  $a_6$ -CONH-group (5  $a_6$  represents a C1-C10 alkyl group substituted with a C1-C10 alkoxy group, or a C2-C10 alkoxy group substituted with a C1-C10 alkoxy group), or an  $a_7$ -NHCO-group ( $a_7$  represents a C2-C10 alkyl group substituted with a hydroxy group, or a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, 10 or a C1-C10 alkyl group substituted with a C1-C10 alkoxy group substituted with a C1-C10 alkoxy group), and  $q_a''$  represents a hydroxy group, a C1-C10 alkoxy group or a piperidino group;

10. A 2H-pyran-2-one compound represented by the formula (X):

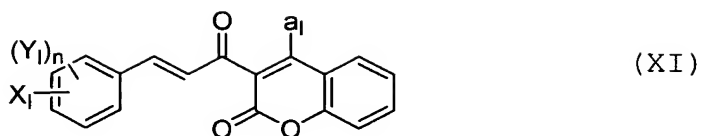


(X)

wherein

$X_I$  represents a C2-C4 alkenyl group substituted with a cyano group, an  $A_I-R_I-O$ -group ( $A_I$  represents a C1-C4 alkylthio group, a C2-C4 alkenyl group, a C2-C4 alkynyl group, a C1-C4 alkoxycarbonyl group, a carboxy group or a cyano group, and  $R_I$  represents a C1-C4 alkylene group), an  $A_{II}-(y)_m-z-NH$ -group ( $A_{II}$  represents a C2-C4 alkenyl group, or a C1-C4 alkyl group substituted with a C1-C4 alkoxy group, a C1-C4 alkoxycarbonyl group, a carboxy group or a cyano group,  $y$  represents an oxy group or an imino group,  $z$  represents a carbonyl group or a sulfonyl group, and  $m$  represents 0 or 1) or an  $A_{III}-NHCO$ -group ( $A_{III}$  represents a methanesulfonyl group, or a C1-C4 alkyl group substituted with a hydroxy group, a C1-C4 alkoxy group, a C1-C4 alkoxycarbonyl group, a carboxy group or a cyano group),  $a_I$  represents a hydroxy group, a C1-C4 alkoxy group, a C2-C4 alkenyloxy group, a C2-C4 alkynyloxy group, a C1-C4 alkylamino group, a C2-C4 alkenylamino group, a C2-C4 alkynylamino group, a morpholino group or a piperidino group,  $Y_I$  represents a halogen atom, a nitro group, a C1-C4 alkyl group or a C1-C4 alkoxy group,  $n$  represents 0, 1 or 2 and, when  $n$  is 2,  $Y_I$ s may be different;

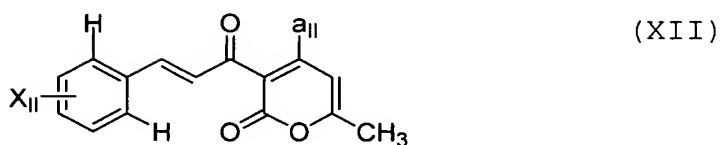
11. A 2H-1-benzopyran-2-one compound represented by the formula (XI):



wherein

$X_I$  represents a C2-C4 alkenyl group substituted with a cyano group, an  $A_I-R_I-O$ -group ( $A_I$  represents a C1-C4 alkylthio group, a C2-C4 alkenyl group, a C2-C4 alkynyl group, a C1-C4 alkoxycarbonyl group, a carboxy group or a cyano group, and  $R_I$  represents a C1-C4 alkylene group), an  $A_{II}-(Y)_m-z-NH$ -group ( $A_{II}$  represents a C2-C4 alkenyl group, or a C1-C4 alkyl group substituted with a C1-C4 alkoxy group, a C1-C4 alkoxycarbonyl group, a carboxy group or a cyano group,  $y$  represents an oxy group or an imino group,  $z$  represents a carbonyl group or a sulfonyl group, and  $m$  represents 0 or 1) or an  $A_{III}-NHCO$ -group ( $A_{III}$  represents a methanesulfonyl group, or a C1-C4 alkyl group substituted with a hydroxy group, a C1-C4 alkoxy group, a C1-C4 alkoxycarbonyl group, a carboxy group or a cyano group),  $a_I$  represents a hydroxy group, a C1-C4 alkoxy group, a C2-C4 alkenyloxy group, a C2-C4 alkynyloxy group, a C1-C4 alkylamino group, a C2-C4 alkenylamino group, a C2-C4 alkynylamino group, a morpholino group or a piperidino group,  $Y_I$  represents a halogen atom, a nitro group, a C1-C4 alkyl group or a C1-C4 alkoxy group,  $n$  represented 0, 1 or 2 and, when  $n$  is 2,  $Y_I$ 's may be different;

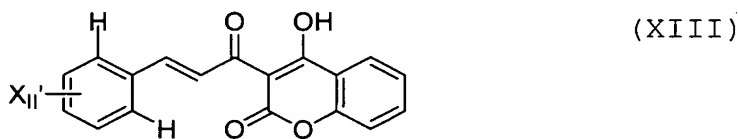
12. A 2H-pyran-2-one compound represented by the formula (XII):



wherein

5     X<sub>II</sub> represents an allyloxy group, a propargyloxy group, a cyanomethoxy group, a methoxyacetyl amino group, a methoxycarbonylmethylaminocarbonyl group or a 2-cyanoethenyl group, and a<sub>II</sub> represents a hydroxy group, a methoxy group or a morpholino group;

10    13. A 2H-1-benzopyran-2-one compound represented by the formula (XIII):



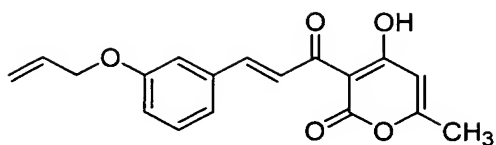
wherein

15     X<sub>II</sub>' represents a cyanomethoxy group, a methoxyacetyl amino group or a 2-hydroxyethylaminocarbonyl group;

14. A 2H-pyran-2-one compound represented by the formula

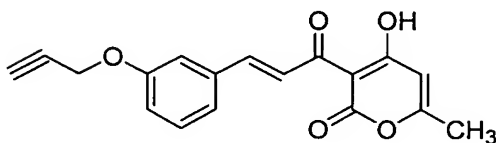
(XIV) :

(XIV) ;



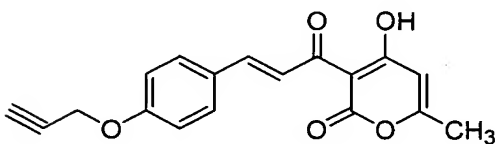
15. A 2H-pyran-2-one compound represented by the formula (XV) :

(XV) ;



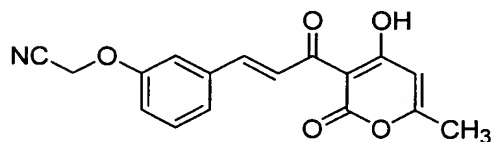
16. A 2H-pyran-2-one compound represented by the formula (XVI) :

(XVI) ;

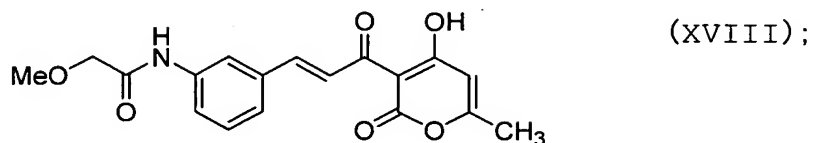


17. A 2H-pyran-2-one compound represented by the formula (XVII) :

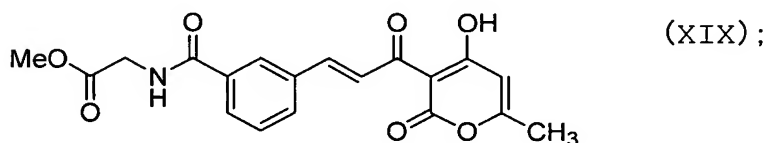
(XVII) ;



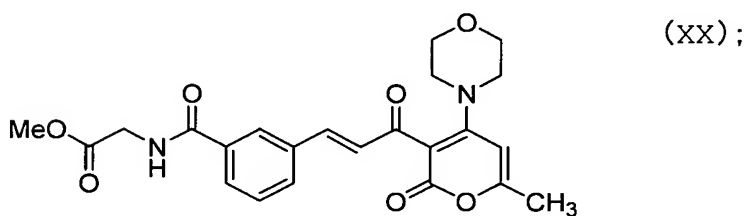
18. A 2H-pyran-2-one compound represented by the formula (XVIII):



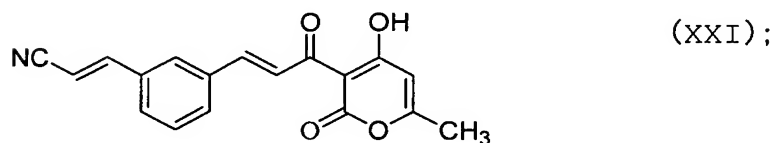
19. A 2H-pyran-2-one compound represented by the formula (XIX):



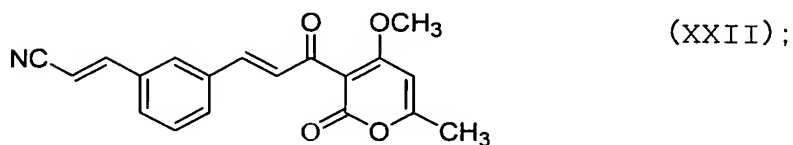
20. A 2H-pyran-2-one compound represented by the formula (XX):



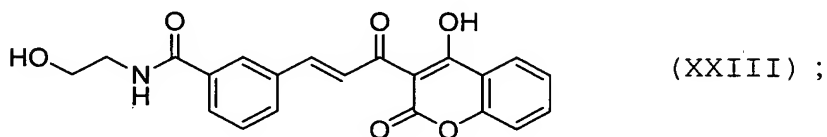
21. A 2H-pyran-2-one compound represented by the formula (XXI):



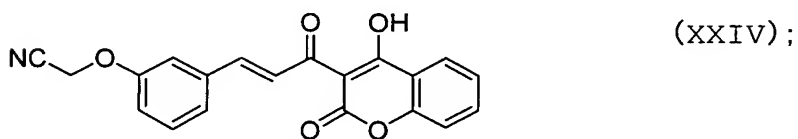
22. A 2H-pyran-2-one compound represented by the formula (XXII):



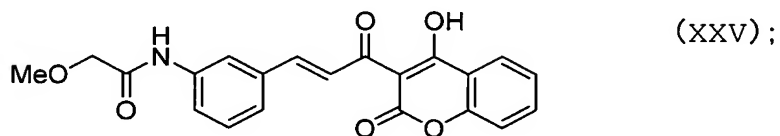
23. A 2H-a-benzopyran-2-one compound represented by the formula (XXIII):



5 24. A 2H-a-benzopyran-2-one compound represented by the formula (XXIV):



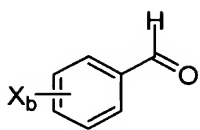
25. A 2H-1-benzopyran-2-one compound represented by the formula (XXV):



26. A benzaldehyde derivative represented by the formula



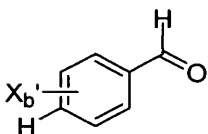
(XXVI-1):



(XXVI-1) ;

[wherein  $X_b$  represents a  $\text{MeO-COCH}_2\text{NHCO}$ -group, a  $\text{MeOCH}_2\text{CHO-CO-NH}$ -group, a  $\text{MeOCH}_2\text{CH}_2\text{NH-CO-NH}$ -group, a  $\text{MeSO}_2\text{NH-CO}$ -group, a  $\text{NCCH}_2\text{NH-CO}$ -group, a  $\text{F}_2\text{C=CH}$ -group, a  $\text{MeO-CO-(MeO-COCH}_2\text{-)CH}$ -group, a  $\text{MeOCH}_2\text{CH}_2\text{NH-SO}_2$ -group, a  $\text{MeO-NHCO}$ -group or a  $\text{CH}_2=\text{CHCH}_2\text{O-NHCO}$ -group.];

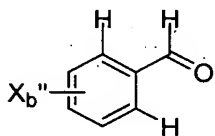
the formula (XXVI -2):



(XXVI-2)

[wherein  $X_b'$  represents a  $\text{MeOCH}_2\text{CO-NH}$ -group or a  $\text{MeOCH}_2\text{CH}_2\text{NH-CO}$ -group.];

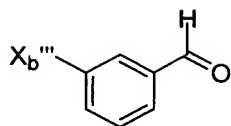
the formula (XXVI-3):



(XXVI-3)

[wherein  $X_b''$  represents a  $\text{MeSCH}_2\text{CH}_2\text{O}$ -group, a  $\text{HOCH}_2\text{CH}_2\text{OCH}_2$ -group or a  $\text{NC-CH}_2\text{CH}_2$ -group.] or

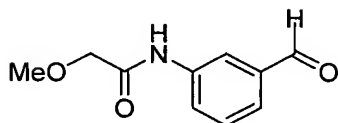
the formula (XXVI-4):



(XXVI-4)

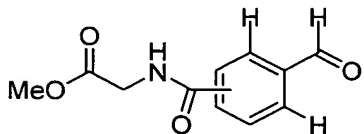
[wherein  $X_b'''$  represents a  $\text{NCCH=CH}$ -group, a  $\text{H}_2\text{NCOCH}_2\text{O}$ -group, a  $\text{MeCOCH}_2\text{O}$ -group, a  $\text{CH}_3\text{O-COCH}_2\text{SCH}_2$ -group, a tetrahydropyran-4-ylidenemethyl group, a  $\text{CH}_3\text{O-COCO-NH}$ -group or a  $(\text{CH}_3\text{O})_2\text{P(=O)CH}_2$ -group.]; or 6-formyl-2-[(2-methoxyethyl)aminocarbonyl]pyridine;

27. A benzaldehyde derivative represented by the formula (XXVII):



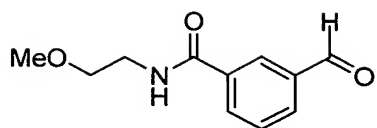
(XXVII)

28. A benzaldehyde derivative represented by the formula (XXVIII):



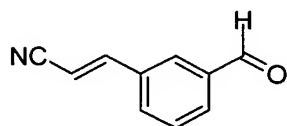
(XXVIII)

29. A benzaldehyde derivative represented by the formula (XXIX):



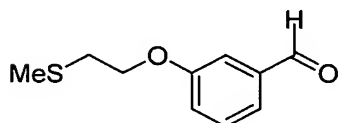
(XXIX)

30. A benzaldehyde derivative represented by the formula  
(XXX):



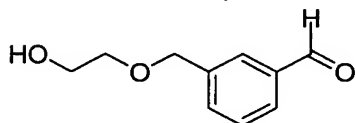
(XXX)

31. A benzaldehyde derivative represented by the formula  
(XXXI):



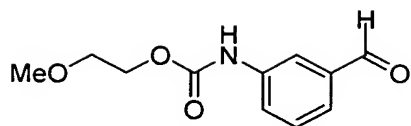
(XXXI)

5 32. A benzaldehyde derivative represented by the formula  
(XXXII):



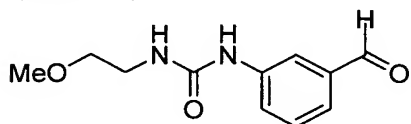
(XXXII)

33. A benzaldehyde derivative represented by the formula  
(XXXIII):



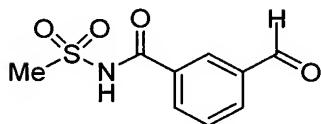
(XXXIII)

34. A benzaldehyde derivative represented by the formula (XXXIV):



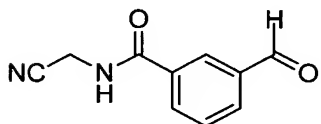
(XXXIV)

35. A benzaldehyde derivative represented by the formula (XXXV):



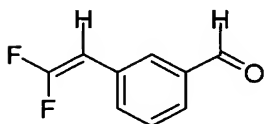
(XXXV)

5 36. A benzaldehyde derivative represented by the formula (XXXVI):



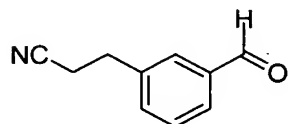
(XXXVI)

37. A benzaldehyde derivative represented by the formula (XXXVII):



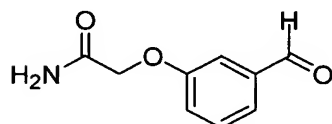
(XXXVII)

38. A benzaldehyde derivative represented by the formula  
(XXXVIII):



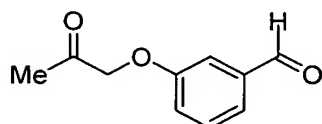
(XXXVIII)

39. A benzaldehyde derivative represented by the formula  
5 (XXXIX):



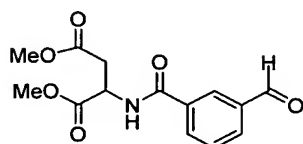
(XXXIX)

40. A benzaldehyde derivative represented by the formula  
(XL):



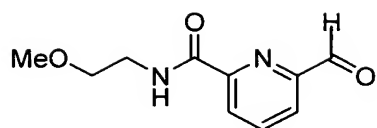
(XL)

41. A benzaldehyde derivative represented by the formula  
(XLI):



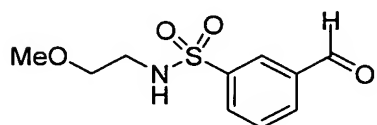
(XLI)

10 42. A pyridinecarbaldehyde derivative represented by the  
formula (XLII):



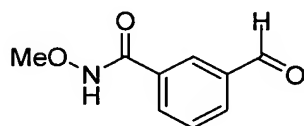
(XLII)

43. A benzaldehyde derivative represented by the formula (XLIII):



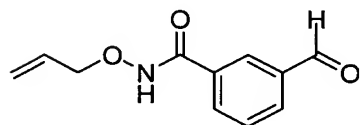
(XLIII)

44. A benzaldehyde derivative represented by the formula (XLIV):



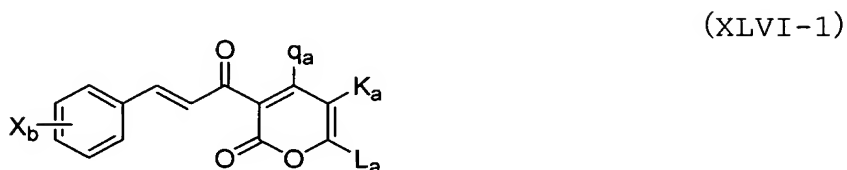
(XLIV)

5 45. A benzaldehyde derivative represented by the formula (XLV):

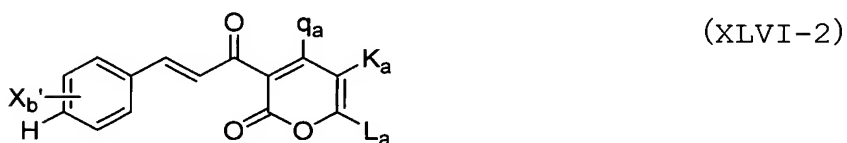


(XLV)

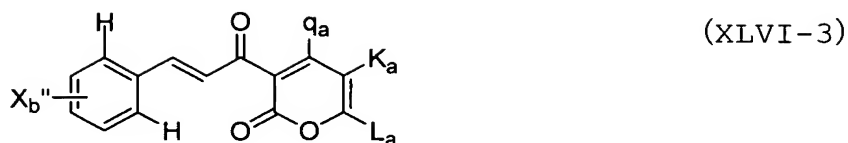
46. A process for producing a cinnamoyl compound represented by the formula (XLVI-1):



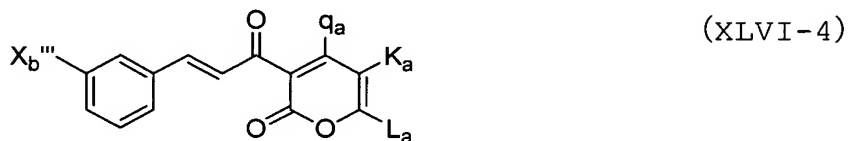
wherein  $X_b$  represents a  $\text{MeO-COCH}_2\text{NHCO-}$ group, a  $\text{MeOCH}_2\text{CH}_2\text{O-CO-NH-}$ group, a  $\text{MeOCH}_2\text{CH}_2\text{NH-CO-NH-}$ group, a  $\text{MeSO}_2\text{NH-CO-}$ group, a  $\text{NCCH}_2\text{NH-CO-}$ group, a  $\text{F}_2\text{C=CH-}$ group, a  $\text{MeO-CO-(MeO-COCH}_2\text{-)CH-}$ group, a  $\text{MeOCH}_2\text{CH}_2\text{NH-SO}_2\text{-}$ group, a  $\text{MeO-NHCO-}$ group or a  $\text{CH=CHCH}_2\text{O-NHCO-}$ group, and  $q_a$ ,  $K_a$  and  $L_a$  are as defined below, the formula (XLVI-2):



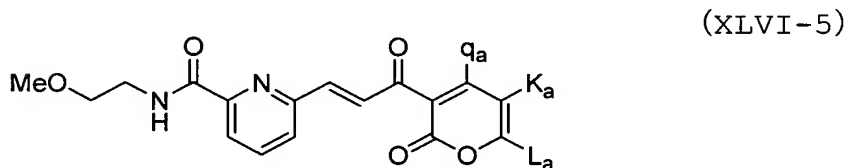
wherein  $X_b'$  represents a  $\text{MeOCH}_2\text{CO-NH-}$ group or a  $\text{MeOCH}_2\text{CH}_2\text{NH-CO-}$ group,  $q_a$ ,  $K_a$  and  $L_a$  are as defined below, the formula (XLVI-3):



wherein  $X_b''$  represents a  $\text{MeSCH}_2\text{CH}_2\text{O}$ -group, a  $\text{HOCH}_2\text{CH}_2\text{OCH}_2$ -group or a  $\text{NC-CH}_2\text{CH}_2$ -group, and  $q_a$ ,  $K_a$  and  $L_a$  are as defined below, the formula (XLVI-4):



wherein  $X_b'''$  represents a  $\text{NCCH=CH}$ -group, a  $\text{H}_2\text{NCOCH}_2\text{O}$ -group, a  $\text{MeCOCH}_2\text{O}$ -group, a  $\text{CH}_3\text{O-COCH}_2\text{SCH}_2$ -group, a tetrahydropyran-4-ylidenemethyl group, a  $\text{CH}_3\text{O-COCO-NH}$ -group or a  $(\text{CH}_3\text{O})_2\text{P(=O)CH}_2$ -group, and  $q_a$ ,  $K_a$  and  $L_a$  are as defined below, or the formula (XLVI-5):



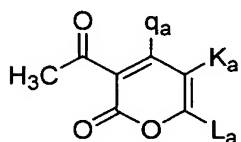
wherein  $q_a$ ,  $K_a$  and  $L_a$  are as defined below,

10 which comprises reacting a benzaldehyde derivative represented by the formula (XXVI-1), the formula (XXVI-2),



the formula (XXVI-3) or the formula (XXVI-4), or 6-formyl-2-[(2-methoxyethyl)aminocarbonyl]pyridine as defined in the above item 26, with a compound represented by the formula (XLVI):

5



(XLVI)

wherein

qa represents a ra-O-group {wherein ra represents a hydrogen atom; a C1-C10 alkyl group; a C3-C10 alkenyl group; a C3-C10 alkynyl group; a C1-C10 alkyl group substituted with a r0r0'N-CH2- group (wherein r0 and r0' are the same or different, and represent a C1-C10 alkyl group), a rOCH2- group (wherein r represents a hydrogen atom or a C1-C10 alkyl group), a r0-CO- group (wherein r0 is as defined above), a C1-C10 alkoxycarbonyl group, a carboxy group, an aminocarbonyl group or a cyano group; or a r3-r1-group (wherein r3 represents a phenyl group or a pyridyl group, and r1 represents a C1-C10 alkylene group)}, a piperidino group, a morpholino group, or a r4r4'N- group (wherein r4 and r4' are the same or different, and represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10

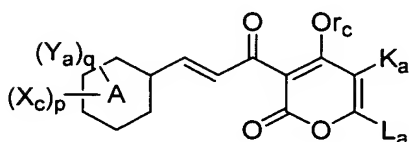
alkenyl group, a C3-C10 alkynyl group, or a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that  $r_4$  and  $r_4'$  are not a hydrogen atom at the same time),

$K_a$  represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and  $L_a$  represents a hydrogen atom or a C1-C10 alkyl group, or

$K_a$  and  $L_a$  together may form a C1-C10 alkylene group or a 1,3-butadienylene group, and

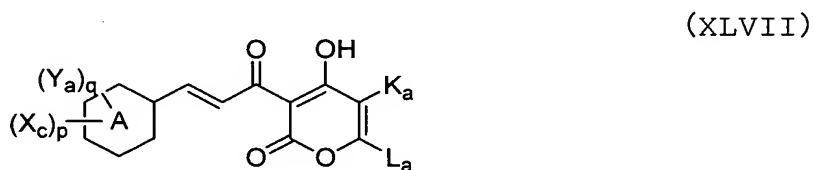
the term "as defined above (or below)" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above (or below) and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

47. A process for producing a cinnamoyl compound represented by the formula (XLVII''):



(XLVII'')

wherein A, X<sub>c</sub>, Y<sub>a</sub>, p, q, r<sub>c</sub>, K<sub>a</sub> and L<sub>a</sub> are as defined below,  
 and the term "as defined above (or below)" used for the  
 same symbols among plural substituents means that the  
 plural substituents independently represent the same  
 5 meaning as that described above (or below) and, among the  
 plural substituents, although the selection range of  
 substituents to be selected is the same, selected  
 substituents may be the same or different as long as they  
 are selected within the range; which comprises reacting a  
 10 cinnamoyl compound represented by the formula (XLVII):



wherein

A represents a benzene ring or a pyridine ring,

X<sub>c</sub> is a substituent on a carbon atom, and represents a  
 C1-C10 alkyl group substituted with a cyano group; a C1-C10  
 15 alkyl group substituted with a tetrahydropyran-4-ylidene  
 group; a C2-C10 alkenyl group substituted with a halogen  
 atom or a cyano group; a C2-C10 alkenyl group substituted  
 with a C1-C10 alkoxycarbonyl group; a C2-C10 alkynyl group  
 substituted with a hydroxymethyl group; an a<sub>0c</sub>-r<sub>1</sub>-b-r<sub>1</sub>'-  
 20 group {wherein a<sub>0c</sub> represents a methyl group substituted

with a C1-C10 alkylthio group, a methyl group substituted with a C1-C10 alkylsulfinyl group, a methyl group substituted with a C1-C10 alkylsulfonyl group, a C2-C10 alkenyl group, a C2-C10 alkynyl group, a  $r_2O-CO-$  group (wherein  $r_2$  represents a C1-C10 alkyl group, or a C2-C10 alkyl group substituted with a hydroxyl group), a  $rr'N-CO-$  group (wherein  $r$  and  $r'$  are the same or different, and represent a hydrogen atom or a C1-C10 alkyl group), an  $a_1-NH-CO-$  group (wherein  $a_1$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group), an  $a_1'-CO-$  group (wherein  $a_1'$  represents a morpholino group), a  $rr'N-CH_2-$  group (wherein  $r$  and  $r'$  are as defined above), a  $r_0-(O)_1-CONH-CH_2-$  group (wherein  $r_0$  represents a C1-C10 alkyl group, and  $1$  represents 0 or 1), a  $r-OCH_2-$  group (wherein  $r$  is as defined above), a  $r_0-CO-$  group (wherein  $r_0$  is as defined above), or a cyano group,  $r_1$  represents a C1-C10 alkylene group,  $r_1'$  represents a single bond or a C1-C10 alkylene group, and  $b$  represents an oxy group, a thio group, a sulfinyl group, a sulfonyl group or a imino group}; an  $a_2-y-CO-NH-$  group (wherein  $a_2$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, and  $y$  represents an oxy group or an imino group); a  $r_0O-COCO-NH-$  group (wherein  $r_0$  is as defined above); an  $a_3-z-NH-$  group (wherein  $a_3$  represents a C2-C10 alkenyl group, or a C1-C10 alkyl group substituted with a C1-10 alkoxy group, a C1-C10

alkoxycarbonyl group or a cyano group, and z represents a carbonyl group or a sulfonyl group); an  $a_4$ -NHCO- group {wherein  $a_4$  represents a C1-C10 alkoxy group, or a C3-C10 alkenyloxy group, or a  $r_0$ -SO<sub>2</sub>- group (wherein  $r_0$  is as defined above), or a C2-C10 alkyl group substituted with a hydroxyl group or a C1-C10 alkoxy group, or a C1-C10 alkyl group substituted with a  $r_0$ O-CO- group (wherein  $r_0$  is as defined above), a cyano group or an aminocarbonyl group, or a  $r_0$ O-CO-( $r_0$ O-COCH<sub>2</sub>)CH- group (wherein  $r_0$  is as defined above)}; an  $a_5$ -NHSO<sub>2</sub>- group (wherein  $a_5$  represents a C2-C10 alkyl group substituted with a C1-C10 alkoxy group); a  $r_0$ ON=CH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHCSNH- group (wherein  $r_0$  is as defined above); a  $r_0$ NHC(-Sr<sub>0</sub>')=N- group (wherein  $r_0$  is as defined above,  $r_0'$  is the same as the different from  $r_0$  and has the same meaning as  $r_0$  has); or a ( $r_0$ O)<sub>2</sub>P(=O)CH<sub>2</sub>- group (wherein  $r_0$  is as defined above);

p represents 1, 2 or 3, and when p is 2 or more, X<sub>c</sub>s are the same or different;

Y<sub>a</sub> represents a halogen atom, a nitro group, a  $r_0$ CO-NH- group (wherein  $r_0$  is as defined above), a C1-C10 alkyl group or a C1-C10 alkoxy group;

q represents 0, 1 or 2, and when q is 2 or more, Y<sub>a</sub>s are the same or different;

K<sub>a</sub> represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and L<sub>a</sub> represents a hydrogen atom or a C1-

C10 alkyl group, or

$K_a$  and  $L_a$  together may form a C1-C10 alkylene group or a 1,3-butadienylene group, and

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range, with a compound represented by the formula (XLVII'):

$r_c-V$  (XLVII')

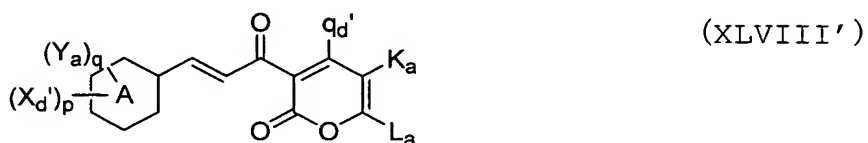
wherein  $r_c$  represents a  $t_c'$ -group { wherein  $t_c'$  represents a C1-C10 alkyl group; a C3-C10 alkenyl group; a C3-C10 alkynyl group; a C1-C10 alkyl group substituted with a  $r_0r_0'N-CH_2-$  group (wherein  $r_0$  and  $r_0'$  are as defined above), a  $rOCH_2-$  group (wherein  $r$  is as defined above), a  $r_0-CO-$  group (wherein  $r_0$  is as defined above), a C1-C10 alkoxy carbonyl group, an aminocarbonyl group or a cyano group; or a  $r_3-r_1-$  group (wherein  $r_3$  represents a phenyl group or a pyridyl group, and  $r_1$  is as defined above)}, and  $V$  represents a leaving group, and

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as

that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

5

48. A process for producing a cinnamoyl compound represented by the formula (XLVIII'):



wherein

10 A is as defined below,

$X_d'$  is a substituent on a carbon atom, and represents an  $a_{0d}'$ - $r_1$ - $b$ - $r_1'$ - group (wherein  $a_{0d}'$  represents a carboxy group, and  $r_1$ ,  $r_1'$  and  $b$  are as defined below), a HO-COCO-NH- group, an  $a_{3d}'$ - $z$ -NH- group (wherein  $a_{3d}'$  represents a  
15 C1-C10 alkyl group substituted with a carboxy group, and  $z$  is as defined below), or an  $a_{4d}'$ -NHCO- group (wherein  $a_{4d}'$  represents a C1-C10 alkyl group substituted with a carboxy group, or a HO-CO-(HO-COCH<sub>2</sub>)CH- group),

$p$  is as defined below and, and when  $p$  is 2 or more,

20  $X_d'$ 's are the same or different,

$Y_a$  and  $q$  are as defined below,

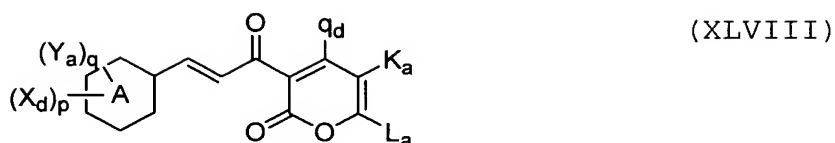
$q_d'$  represents a  $r_d''$ -O- group {wherein  $r_d''$  represents a hydrogen atom; a C1-C10 alkyl group; a C3-C10 alkenyl group; a C3-C10 alkynyl group; a C1-C10 alkyl group substituted with a  $r_0r_0'$ N-CH<sub>2</sub>- group (wherein  $r_0$  and  $r_0'$  are as defined below), a  $r$ OCH<sub>2</sub>- group (wherein  $r$  is as defined below), a  $r_0$ -CO- group (wherein  $r_0$  is as defined below), a carboxy group, an aminocarbonyl group or a cyano group; or a  $r_3$ - $r_1$ - group (wherein  $r_3$  represents a phenyl group or a pyridyl group, and  $r_1$  is as defined below)}, a piperidino group, a morpholino group, or a  $r_4r_4'$ N- group (wherein  $r_4$  and  $r_4'$  are as defined below, provided that they are not hydrogen atom at the same time),

$K_a$  and  $L_a$  are as defined below, and

the term "as defined above (or below)" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above (or below) and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

which comprises hydrolyzing a cinnamoyl compound represented by the formula (XLVIII):





wherein

A represents a benzene ring or a pyridine ring,

$X_d$  is a substituent on a carbon atom, and represents an  $a_{0d}-r_1-b-r_1'$ - group {wherein  $a_{0d}$  represents a  $r_2O-CO$ - group (wherein  $r_2$  represents a C1-C10 alkyl group, or a C2-C10 alkyl group substituted with a hydroxy group),  $r_1$  represents a C1-C10 alkylene group,  $r_1'$  represents a single bond or a C1-C10 alkylene group, and b represents an oxy group, a thio group, a sulfinyl group, a sulfonyl group or an imino group}, a  $r_0O-COCO-NH$ - group (wherein  $r_0$  represents a C1-C10 alkyl group), an  $a_{3d}-z-NH$ - group (wherein  $a_{3d}$  represents a C1-C10 alkyl group substituted with a C1-C10 alkoxy carbonyl group, and z represents a carbonyl group or a sulfonyl group), or an  $a_{4d}-NHCO$ - group {wherein  $a_{4d}$  represents a C1-C10 alkyl group substituted with a  $r_0O-CO$ - group (wherein  $r_0$  is as defined above), or a  $r_0O-CO-(r_0O-COCH_2)CH$ - group (wherein  $r_0$  is as defined above)},

p represents 1, 2 or 3, and when p is 2 or more,  $X_d$ s are the same or different,

$Y_a$  represents a halogen atom, a nitro group, a  $r_0CO$ -

NH- group (wherein  $r_0$  is as defined above), a C1-C10 alkyl group or a C1-C10 alkoxy group,

$q$  represents 0, 1 or 2, and when  $q$  is 2 or more,  $Y_a$ s are the same or different;

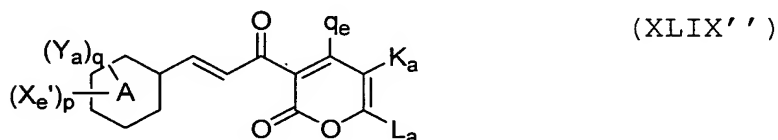
5  $q_d$  represents a  $r_d$ -O- group {wherein  $r_d$  represents a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, a C1-C10 alkyl group substituted with a  $r_0r_0'$ N-CH<sub>2</sub>- group (wherein  $r_0$  is as defined above, and  $r_0'$  is the same as or different from  $r_0$  and has the  
10 same meaning as  $r_0$  has), a  $r$ OCH<sub>2</sub>- group (wherein  $r$  is as defined above), a  $r_0$ -CO- group (wherein  $r_0$  is as defined above), a C1-C10 alkoxycarbonyl group, a carboxy group, an aminocarbonyl group or a cyano group, or a  $r_3$ - $r_1$ -group (wherein  $r_3$  represents a phenyl group or a pyridyl group,  
15 and  $r_1$  is as defined above)}; a piperidino group; a morpholino group; or a  $r_4r_4'$ N- group (wherein  $r_4$  and  $r_4'$  represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, or a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that  
20 they are not a hydrogen atom at the same time),,

$K_a$  represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and  $L_a$  represents a hydrogen atom or a C1-C10 alkyl group, or

$K_a$  and  $L_a$  together may form a C1-C10 alkylene group or  
25 a 1,3-butadienylene group,

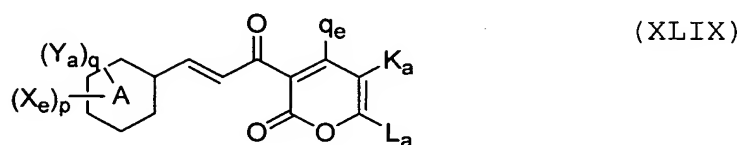
the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

49. A process for producing a cinnamoyl compound represented by the formula (XLIX''):



wherein  $X_e'$  represents an  $a_{0e}'-r_1''-b''$ - group {wherein  $a_{0e}'$  represents an  $a_{0e}$ - group (wherein  $a_{0e}$  is as defined below), a 3-sulfopropyl group or a 4-sulfobutyl group, and  $r_1''$  and  $b''$  are as defined below}, and A,  $Y_a$ , p, q,  $q_e$ ,  $K_a$  and  $L_a$  are as defined below, and the term "as defined above (or below)" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above (or below) and, among the plural substituents, although the selection range of substituents to be selected is the same, selected

substituents may be the same or different as long as they are selected within the range;  
 which comprises reacting a cinnamoyl compound represented by the formula (XLIX):



5 wherein

A represents a benzene ring or a pyridine ring,

X<sub>e</sub> is a substituent on a carbon atom, and represents a H-b''- group (wherein b'' represents an oxy group or a thio group),

10 p represents 1, 2 or 3 and, when p is 2 or more, X<sub>e</sub>s are the same or different,

Y<sub>a</sub> represents a halogen atom, a nitro group, a r<sub>0</sub>CO-NH- group (wherein r<sub>0</sub> is a C1-C10 alkyl group), a C1-C10 alkyl group or a C1-C10 alkoxy group,

15 q represents 0, 1 or 2, and when q is 2 or more, Y<sub>a</sub>s are the same or different;

q<sub>e</sub> represents a r<sub>e</sub>-O- group (wherein r<sub>e</sub> represents a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, a C1-C10 alkyl group substituted with a  
 20 r<sub>0</sub>r<sub>0</sub>'N-CH<sub>2</sub>- group (wherein r<sub>0</sub> is as defined above, and r<sub>0</sub>'

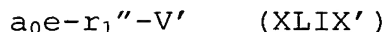
is the same as or different from  $r_0$  and has the same meaning as  $r_0$  has), a  $rOCH_2-$  group (wherein  $r$  represents a hydrogen atom or a C1-C10 alkyl group), a  $r_0-CO-$  group (wherein  $r_0$  is as defined above), a C1-C10 alkoxy carbonyl group, an aminocarbonyl group or a cyano group, or a  $r_3-r_1-$  group (wherein  $r_3$  represents a phenyl group or a pyridyl group, and  $r_1$  represents a C1-C10 alkylene group)); a piperidino group; a morpholino group; or a  $r_4r_4'N-$  group (wherein  $r_4$  and  $r_4'$  represent a hydrogen atom, a C1-C10 alkyl group, a C3-C10 alkenyl group, a C3-C10 alkynyl group, or a C2-C10 alkyl group substituted with a C1-C10 alkoxy group, provided that they are not a hydrogen atom at the same time),

$K_a$  represents a hydrogen atom, a halogen atom or a C1-C10 alkyl group, and  $L_a$  represents a hydrogen atom or a C1-C10 alkyl group, or

$K_a$  and  $L_a$  together may form a C1-C10 alkylene group or a 1,3-butadienylene group, and

the term "as defined above" used for the same symbols among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range,

with a compound represented by the formula (XLIX'):



wherein

$a_{0e}$  represents a methyl group substituted with a C1-  
 5 C10 alkylthio group, a methyl group substituted with a C1-  
 C10 alkylsulfinyl group, a methyl group substituted with a  
 C1-C10 alkylsulfonyl group, a C2-C10 alkenyl group, a C2-  
 C10 alkynyl group, a  $r_2\text{O}-\text{CO}-$  group (wherein  $r_2$  represents a  
 C1-C10 alkyl group, or a C2-C10 alkyl group substituted  
 10 with a hydroxy group), a  $rr'\text{N}-\text{CO}-$  group (wherein  $r$  and  $r'$   
 are the same or different, and represent a hydrogen atom or  
 a C1-C10 alkyl group), an  $a_1-\text{NH}-\text{CO}-$  group (wherein  $a_1$   
 represents a C2-C10 alkyl group substituted with a C1-C10  
 alkoxy group), an  $a_1'-\text{CO}-$  group (wherein  $a_1'$  represents a  
 15 morpholino group), a  $rr'\text{N}-\text{CH}_2-$  group (wherein  $r$  is as  
 defined above,  $r'$  is the same as or different from  $r$  and  
 has the same meaning as  $r$  has), a  $r_0-(\text{O})_1-\text{CONH}-\text{CH}_2-$  group  
 (wherein  $r_0$  is as defined above, and 1 represents 0 or 1),  
 a  $r-\text{OCH}_2-$  group (wherein  $r$  is as defined above), a  $r_0-\text{CO}-$   
 20 group (wherein  $r_0$  is as defined above) or a cyano group,

$r_1''$  is the same as or different from  $r_1$  and has the  
 same meaning as  $r_1$  has, and  $V'$  represents a leaving group  
 or a hydroxy group, or 1,3-propanesultone or 1,4-  
 butanesultone

25 the term "as defined above" used for the same symbols

among plural substituents means that the plural substituents independently represent the same meaning as that described above and, among the plural substituents, although the selection range of substituents to be selected is the same, selected substituents may be the same or different as long as they are selected within the range;

50. Use of a compound according to any one of claims 1 to 25 as an active ingredient for suppressing transcription of a Type I collagen gene;

51. A composition for suppressing transcription of a Type I collagen gene, which comprises a compound according to any one of claims 1 to 25 and an inert carrier;

52. Use of a compound according to any one of claims 1 to 25 as an active ingredient for decreasing expression of a Type I collagen gene to induce a reduction in accumulation of collagen and thereby improving tissue fibrosis;

53. A composition for improving tissue fibrosis, which comprises a compound according to any one of claims 1 to 25 and an inert carrier;

54. A method for improving tissue fibrosis, which comprises administering an effective amount of a compound according to any one of claims 1 to 25 to a mammal in need thereof;

5

55. Use of a compound according to any one of claims 1 to 25 as an active ingredient for suppressing the activity of TGF- $\beta$ ;

10

56. A composition for suppressing the activity of TGF- $\beta$ , which comprises a compound according to any one of claims 1 to 25 and an inert carrier;

15

57. Use of a compound according to any one of claims 1 to 25 as an active ingredient for inhibiting a promoting effect of TGF- $\beta$  on transition to a hair regression phase to induce extension of a hair growth phase and thereby providing hair-growing effect;

20

58. A composition for hair growth which comprises a compound according to any one of claims 1 to 25 and an inert carrier;

25

59. A method for growing hair, which comprises administering an effective amount of a compound according



to any one of claims 1 to 25 to a mammal in need thereof;

60. Use of a compound according to any one of claims  
1 to 25 as an active ingredient for treating chronic renal  
5 failure;

61. An agent for treating chronic renal failure,  
which comprises a compound according to any one of claims 1  
to 25 and an inert carrier;  
10

62. Use of a compound according to claim 2 as an  
active ingredient for suppressing transcription of a Type I  
collagen gene;

15 63. A composition for suppressing transcription of a  
Type I collagen gene, which comprises a compound according  
to claim 2 and an inert carrier;

64. Use of a compound according to claim 3 as an  
20 active ingredient for suppressing transcription of a Type I  
collagen gene;

65. A composition for suppressing transcription of a  
Type I collagen gene, which comprises a compound according  
25 to claim 3 and an inert carrier;

66. Use of a compound according to claim 4 as an active ingredient for suppressing transcription of a Type I collagen gene;

5

67. A composition for suppressing transcription of a Type I collagen gene, which comprises a compound according to claim 4 and an inert carrier;

10

68. Use of a compound according to claim 10 as an active ingredient for suppressing transcription of a Type I collagen gene;

15

69. A composition for suppressing transcription of a Type I collagen gene, which comprises a compound according to claim 10 and an inert carrier;

20

70. Use of a compound according to claim 11 as an active ingredient for suppressing transcription of a Type I collagen gene;

25

71. A composition for suppressing transcription of a Type I collagen gene, which comprises a compound according to claim 11 and an inert carrier;

72. Use of a compound according to claim 14 to 25 as an active ingredient for suppressing transcription of a Type I collagen gene;

5 73. A composition for suppressing transcription of a Type I collagen gene, which comprises a compound according to claim 14 to 25 and an inert carrier.